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M E D I C A L  
C O M M E N T A R I E S,

FOR THE YEAR M,DCC,LXXXVI.

EXHIBITING

A CONCISE VIEW OF THE LATEST AND MOST  
IMPORTANT DISCOVERIES IN MEDICINE  
AND MEDICAL PHILOSOPHY.

COLLECTED AND PUBLISHED BY

ANDREW DUNCAN, M.D.F.R. & A.S. ED.

PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES  
FOR SCOTLAND,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH,  
AND MEMBER OF THE ROYAL SOCIETIES OF MEDICINE  
OF PARIS, COPENHAGEN, EDINBURGH, &c.

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*Neglecta reducit, sparsa colligit, utilia selegit, necessaria ostendit, sic utile.*  
Baglivius.

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DECADE SECOND.

V O L. I.

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EDINBURGH:

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M,DCC,LXXXVII.



THIS VOLUME  
OF  
MEDICAL COMMENTARIES

IS RESPECTFULLY INSCRIBED TO

JOHN HUNTER, ESQ.  
SURGEON IN LONDON;

Whose abilities have deservedly raised him  
to the first eminence in his profession,

Whose discoveries have made considerable additions  
to the value of this publication,

And whose friendship will ever be gratefully remembered  
by his most obedient servant,

ANDREW DUNCAN.

*Si ad utilitatem vitæ omnia consilia factaque nosira dirigenda sunt, quid erit tutius quam eam exercere artem, qua semper armatus præsidium amicis, opem alienis, salutem periclitantibus feras?*  
Quintilianus.



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## P R E F A C E.

**F**OR several different reasons, which it is unnecessary to mention, we have been induced to begin a new series of volumes with this work. The present volume, therefore, which would otherwise have been the eleventh, is intitled the first of the second Decade.

Where the object of a periodical publication is to collect improvements and discoveries, it cannot be expected that every volume will be equally interesting. It is not at every period that improvements of equal merit are either made or communicated to the public, and the supply of original papers must be subjected to the same variety. Where, therefore, equal exertions of judgment and industry are employed in conducting this publication, the comparative merit of different volumes

must yet depend a good deal upon accident. Such accident has, in our opinion, operated very strongly in favour of the present volume; and we flatter ourselves with the hopes, that, to the candid and attentive reader, the perusal of it will afford no inconsiderable degree of satisfaction.

It would be uncharitable to suppose that there is any one engaged in the practice of medicine, who does not entertain a wish to be acquainted with every new opinion and alleged discovery, which derives its origin, not from the ignorant and designing empiric, but from the unprejudiced and liberal-minded observer. To those, therefore, who have neither ready access to public libraries, nor leisure for extensive reading, this work must afford much desirable information, which they have it not in their power to derive from the original source, and which they might find it very difficult to obtain by other channels: To those who are in a different situation, and whose chief pleasure consists in the perusal of ingenious and useful publications, an accurate abridgment even of those works on which they have bestowed the greatest attention, will

will not be unacceptable; especially as they will now find our analysis of books interspersed with observations on the degree of credit which we think they deserve. Where, however, in the present volume, we have had occasion to differ from authors of the first eminence, our sentiments, though stated with freedom, are yet, we trust, expressed with that respect which is due to merit, and that diffidence which the nature of the subject demands: And this line of conduct it is our intention steadily to pursue.

With the original observations communicated to the public through the channel of this work, we have used no other freedom than that of making, on some occasions, slight alterations in the language; which, we are persuaded, will not be found in any degree to affect the sense. With this freedom none of our correspondents will, we trust, be displeased. For the truth or accuracy of the observations communicated to us, we cannot pretend to vouch; but we may venture to say, that some of them, while they differ not a little from opinions commonly received, are of such importance in practice as to deserve



the most serious attention. And those who happen to be placed in situations enabling them to make similar observations, cannot easily render a more important service to the healing art, than by presenting to the public observations made with candour and accuracy, which may serve to demonstrate the propriety of either continuing or deserting the practices here recommended, on the basis of extensive experience.

Future communications intended for this work, may either be transmitted to the shop of Mr Charles Elliot and Co. bookfellers, N<sup>o</sup> 332, opposite Somerset Buildings in the Strand, London, or to Dr Duncan at Edinburgh; and where papers sent us are not inserted, we shall, as has hitherto been our practice, communicate, in a private way, our reasons for this rejection to those by whom they are transmitted, when we know how to address letters to them. Of anonymous papers we do not reckon it necessary to take any notice.

Although we cannot promise for the exact and regular periodical publication of future volumes, yet we have now more reason than  
ever



ever to hope, that we shall be able to accomplish it without interruption ; and, unless we be retarded by unforeseen accidents, the public may expect that our succeeding volumes will be had, annually, in the shops both of London and Edinburgh by the 1st of January.

EDIN. Dec. 20. }  
1786. }

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# M E D I C A L C O M M E N T A R I E S,

FOR THE YEAR 1786.

VOL. I. DECADE II.

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## S E C T. I.

*Account of New Books.*

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### I.

*Observations Importantes sur l'usage du suc gastrique dans la Chirurgie rassembles, par Jean Senebier, Ministre du Saint Evangile, & Bibliothecaire des la Republique de Geneve. Avec quelques additions, de M. Abbé Spallanzani, a ses Expériences sur la Digestion, 8vo. A Geneve.*

THE learned Author of the Treatise before us commences the present work, by giving a short account of the use of the gastric juice for different purposes in surgery. It is

VOL. I. DEC. II.

A

needless to observe, that much light has lately been thrown on the nature and properties of this important fluid, by the ingenious Spallanzani. Of these we have endeavoured to give some account in a former volume.

In the month of April 1783, Mr Senebier published some considerations respecting the experiments which the Abbé Spallanzani had made on Digestion. He did not, however, as he now tells us, entertain the expectation, that the views which he had there announced, concerning the use of the succus gastricus, could, in so short a time, have been productive of such important effects as have already resulted from it. The almost invincible aversion of many physicians and surgeons to make trial of new remedies, proceeding, perhaps, from the fear of making trials which may prove ineffectual or hurtful, and perhaps in part from that laziness which is natural to men much occupied, led him to imagine, that it might at least be a long time before this article had a proper trial in actual practice.

Fortunately, however, he observes, neither aversion to novelty, fear, nor sloth, operate with all medical practitioners. One of the first  
to



to whom he communicated his ideas was Mr Jurine, surgeon in Geneva; a man no less distinguished for extensive knowledge in his profession, than for the ardent desire he has of extending the bounds of science, and of increasing the means of alleviating the miseries of mankind. To him the suggestions of Mr Senebier appeared so natural, that he lost no time in putting them to the test of experience. He employed the *fuccus gastricus* in practice, and soon saw the happiest effects result from its use.

When Mr Senebier saw his hopes thus realized, by the cures which Mr Jurine performed by means of the *fuccus gastricus*, he communicated the result of these trials to Count Morozzo at Turin, who was also desirous of having experiments made, to appreciate the value of this new remedy. The Count then recommended this remedy to the attention of Mr Toggia, belonging to the School of Farriery at Turin, and well known as the author of an useful treatise on the diseases of Bestial. Mr Toggia employed the *fuccus gastricus*, first in the diseases of domestic animals, and then against those of the human body. From these trials he obtained as satisfactory success as had attended

tended the experiments of Mr Jurine at Geneva.

After this, Mr Senebier informed Abbé Spallanzani of the happy consequences which had resulted from his discoveries, and of the advantages which they promised to those who should employ the *fuccus gastricus* in the cure of sores. That great naturalist communicated this intelligence to Mr Carminati, a celebrated Professor of Medicine and Surgery at Pavia; well known by his excellent treatise *de Animalium ex mephitibus & noxiis halitibus interitu*. Mr Carminati made it the subject of his attention, and has found materials for an useful and curious treatise, which he proposes soon to publish on this subject. But, in the present treatise, we are presented also with the result of his trials, as well as with those of Messrs Jurine and Toggia.

The experiments and observations of Mr Jurine, respecting the use of the *fuccus gastricus* in the cure of sores, are here related in his own words, as communicated to Mr Senebier. Before giving an account of his practical observations, he thinks it necessary to advertise the reader, that he did not employ this

new



new remedy, till he was assured of its principal properties by his own trials, and till he had made an analysis of it which satisfied his mind respecting the employment of it. Humanity, he observes, rendered these precautions indispensably necessary.

He would have preferred, he tells us, the *succus gastricus* of carnivorous birds, and especially that of the Eagle, if it could have been easily procured. But this not being the case, he had recourse to what was most easily obtained, the *succus gastricus* of bullocks and sheep. For procuring the *succus gastricus* in greatest purity, the animal must be kept fasting for the night before it is to be killed. This, however, he observes, is more particularly necessary with respect to sheep than to oxen.

As soon as the animal is killed, the *succus gastricus* is to be sought for in the first stomach; for there it is to be found most in a liquid state, though still mixed with some remains of the vegetables used in food, and impregnated with their colouring matter. It is to be filtrated through fine linen, and kept in bottles for use. In employing it, the quantity

to be used at a time must be gently heated in warm water. The ulcers are then to be washed with it, and afterwards dressed with charpie, upon which more of the fuccus gastricus is to be poured. This is to be covered with a compress moistened with the same liquor, which is also to be wetted with it every two hours, if possible. But it will be sufficient to dress the sore twice a-day.

This application, though in the end efficacious, always occasions at first more acute pain than the patient felt before. And of this circumstance it is necessary to forewarn him, that he may not be disquieted by this momentary pain; for after the second, or, at the utmost, the third dressing, it is no more to be felt.

The effect of this remedy is to allay, on some occasions. as if it were even by enchantment, those lancinating pains which patients before suffered; to remove all disagreeable smell from foetid ulcers; to give them a clean appearance; to change the quantity and quality of the suppurated matter, and to obtain a speedy cicatrization.

Although the Abbé Spallanzani had made numberless and decisive experiments, on the nature



nature of the succus gastricus of different animals; and although these were sufficient to leave no doubt respecting what he had advanced, yet Mr Jurine was desirous, for his own satisfaction, of repeating some of them on the succus gastricus of ruminant animals relative to meat; because he was doubtful whether nature had given to this solvent as antiseptic a quality as to that of carnivorous or omnivorous animals. To determine this, in the month of September 1783, when Mr Reaumur's thermometer stood from 16 to 19 degrees in the course of the day, he put a quantity of pure gastric juice, obtained from an ox, into four different phials. One glass contained pure gastric juice of the temperature of the atmosphere at the time; a second, containing the same juice, was placed in ice, and the bottle well corked; in the third, a small morsel of beef, freed from fat, was added to the gastric juice; and to that contained in the last, were added a few drops of vitriolic acid. The result was, that the first glass remained inodorous for thirty hours; but about the end of forty-eight hours, it contracted an evident foetid odour. The second glass had its contents preserved

in the ice for the space of fourteen days without any alteration ; and might probably have been preserved much longer, had not this been thought a sufficiently satisfactory result. The beef in the third glass, in corrupting itself, corrupted also the fluid in which it was contained, about the end of eight hours. The mixture in the fourth glass with vitriolic acid shewed no obvious fermentation. It was preserved free from any marks of putridity for ten days, and was then thrown out.

From these experiments, it evidently appeared that heat is very adverse to the preservation of the gastric juice, and that its mixture with meat contributes very much to hasten its corruption. Hence it may be concluded, that to derive advantage from the gastric juice of ruminant animals in the cure of ulcers, it is necessary to renew it often, and to have fresh juice at least every two days during the summer. It may, however, be evidently preserved for a long time, by keeping it in ice, or in an ice-house.

After these preliminary remarks, Mr Jurine next proceeds to relate his observations respecting the use of this succus gastricus as applied to ulcers.

The



The first case he mentions is that of a woman sixty-eight years of age, who had on her left leg a foul ulcer, with varices of a considerable size. By its form, its depth, and the bad appearance of the surrounding flesh, it seemed to be in the progress of extending very fast. It was dressed with the gastric juice, and cured in fourteen days.

The second case is that of a man about forty years of age, a mason by profession. He had been affected for two years with a very fordid ulcer on his leg, about the size of half-a-crown, near the internal malleolus. He had employed many different remedies, without effect. He was radically cured, by the application of the gastric juice, in the space of twenty-four days, during which time there took place a slight exfoliation of the bone.

The third case is that of Madam G—, who had for the space of eighteen months a dreadful ulcer on the inside of her right leg. It had become almost circular, and included several corroded varices at different places. The discharge from it was in great quantity, of an ulcerous nature, and excessively foetid. The patient was, besides this, subjected to a slow fever,

ver, which had emaciated her to the utmost degree. It was dressed for some days with an ointment composed of tallow, pitch, and storax. After this, the succus gastricus was employed, which, at the end of three days, produced a good suppuration, in small quantity, and without any foetid odour, while the flesh below appeared very beautiful. This lady, who had before been tormented by the most excruciating pain, and by a constant want of sleep, recovered in a short time both sleep and ease; her appetite was restored; she became plump; and, in a word, there took place over her whole body a very surprising change for the better. Her ulcers were perceptibly diminished, and Mr Jurine thinks, that they would have been radically cured had she submitted to proper regimen, and to the use of some internal remedies, for removing the cause of her complaint; but by an ill-placed obstinacy she did not, he tells us, receive the complete good effects of the topical application, or of his care. At the time of his relating the case, she had still a small ulcer, accompanied with some small sinuses, which gave daily discharge to a part of that superabundant acrimony, the discharge of  
of



of which seems to have become indispensably necessary.

Altho' this lady was not completely cured, yet it is by no means, he thinks, from thence to be inferred, that the succus gastricus was inadequate to that effect ; since, altho' her own conduct opposed the cure, the ulcer was reduced to very small space ; besides this, we ought not, he observes, to view the succus gastricus as being a topical application, capable of curing both ulcers and their causes, when these depend on a depraved state of the fluids.

The fourth case is that of the wife of a carpenter, in her fifty-second year, who had a cancer in her left breast, from which she had been several times in danger of losing her life, particularly from hæmorrhogies. Mr Jurine had employed against this dreadful disease, both at its beginning and during its progress, almost all these remedies which are used in similar cases. This complaint had extended under the axilla, and to the upper parts of the breast, where it formed abscesses of a very singular nature, and which clearly announced that acrimony to which they owed their origin. There suddenly appeared red spots on different places,

places, and by the next day there had taken place a corrosion of the skin, the cellular membrane, and even of the muscles. This unfortunate female suffered almost incredibly from this complication of complaints, when Mr Jurine had recourse to the use of the succus gastricus: While, however, he poured this into all the cavities, he at the same time made the patient take lizards internally. He had the satisfaction of finding, that the pains were almost completely removed by the second day, the smell almost entirely vanished, and fourteen different ulcers in her breast were cicatrized in succession, and the breast itself was much better. In a word, there wanted, he observes, nothing to compleat the cure but to evacuate the cancerous virus diffused through the mass of blood. But where, says he, is this specific to be found? Suffering humanity possess not that good fortune, nor art that degree of perfection. He experienced then, for all his satisfaction, the pleasure of seeing his patient await for about four months the moment which terminated all her complaints.

The fifth case is that of Mr P—, who had for the space of two years been afflicted with a  
very



very painful tumour above the rotula. On the third year it came to suppuration ; after which it underwent different variations, from better to worse ; at one period, however, for the space of six weeks, it seemed to be quite heal. But altho' a great variety of remedies were employed to extirpate the cause of this complaint, the ulcer eluded the effects of all of them, and always commenced again from the same bottom. He saw this gentleman on the seventh year of his complaint ; the ulcer was then about nine inches in its greatest diameter, and it discharged a great quantity of very foetid sanies ; the edges had a round and mangled appearance, and the middle was, as if divided into several islands by cutaneous interstices. The bottom presented only livid fungous flesh.

He suffered a great deal both day and night ; and although his constitution was originally good, yet worn out by a disease so painful and of such long continuance, it was sensibly affected.

Being at that time unacquainted with the effects of the gastric juice, he began the cure by use of tar, without any mixture. This procured, though not without pain, the removal

val of all the interstices of skin which seemed to oppose the cicatrization of the ulcer, and of the fungous flesh; which however was often succeeded by large eschars leaving after their exfoliation good florid-coloured flesh at the bottom.

After the use of this topical application for the space of six months, recourse was had to the gastric juice. The first applications were painful; but in a few days the advantage was manifest, both by the complete softening of the edges of the ulcer, and by new skin making a rapid progress over the ulcer. Every day his general health, which began to be amended during the use of the tar, was more perfectly re-established. He suffered little, his nights were easy, his appetite good and regular, and he could walk about without much pain.

But an intermittent fever supervened, by which the progress of the cure was retarded; after that the recovery was much more slow. But at the time when Mr Jurine wrote the account of this case the ulcer was entirely superficial, the surface was not above two inches in diameter; it was of a good colour; the matter discharged had the appearance of cream, and  
nothing



nothing seemed wanting to complete the cure but its being cicatrized. The patient, with respect to all his functions, was in perfect health, continuing to walk about without difficulty.

The sixth case is that of E— B—, a girl in the 14th year of her age. She had been distressed for four months with a fixed ulcer at the internal maleolus of the right foot, from which she suffered a great deal. In this situation she was carried to the hospital of which Mr Jurine is surgeon. He began by purging her; he put her upon a proper diet, and dressed the sore with dry charpie, covered with a slightly adhesive plaister. She remained perfectly at rest; but notwithstanding this, the sore gradually increased. The flesh swelled up, and became fungous, and the ulcer extended so far as to be about two inches and a half in diameter.

With the intention of keeping down the fungous flesh, Mr Jurine had recourse to slight escharotics, such as burnt allum, the unguentum *Ægyptiacum*, &c. These, however, produced no change for the better. On the contrary, this poor girl was now tormented with severe pains, which entirely deprived her  
of

of sleep. Two months and a half were thus consumed, in following a treatment which he considered as well suited to the case; but seeing that the girl's health was every day in greater danger, he had recourse to the succus gastricus, which very speedily alleviated her pains, cleaned the ulcer, and produced a perfect cure of it in the space of five weeks.

To these six cases, Mr Jurine observes that he could have added several others, of simple ulcers, very speedily cured by the use of this remedy. But his object was to give histories of affections somewhat different from each other in their nature and appearance: and he adds, that if the success which he has obtained can induce other surgeons to adopt this new remedy, they will find in its use a new means of allaying some of the calamities of mankind.

From these cases, several corollaries are deduced. It is observed,

1. That the gastric juice has the property of alleviating, both certainly and speedily, those pains which ulcers of the worst kind produce.

2. That it recovers the flesh, removes what is in a bad state, and softens the callous edges of ulcers.

3. That



3. That it dissipates the disagreeable smell arising from affected parts.

4. That it diminishes excessive suppuration, and produces laudable pus.

5. And finally, that it accelerates cicatrization.

After these remarks by Mr Jurine, we are next presented with the observations of Mr Toggia on the same subject. He began the use of the gastric juice, by the treatment of a horse very much wounded in the shivers. He washed the sore with the gastric juice of a sheep, and covered it with lint moistened in the same fluid. This dressing was repeated daily, and he observed, that every day the wound became cleaner, and that its diameter diminished. In fine, it was very soon cicatrized, without the use of any other remedy.

The success which he had in this cure led him to try it with a bullock, whose neck was covered with several small ulcers; with scabs which particularly appeared about the mane, and first dorsal vertebræ. They discharged an ichorous and very foetid purulent matter, which occasioned a distressing itchy sensation. Mr Toggia had here in vain employed, what he

considered as the best remedies. At length he thought of trying the gastric juice, continuing, however, at the same time, the use of some internal remedies. Under the use of this application he succeeded in overcoming the acrimony of the humours, as well as the itchy sensation ; and he obtained, at the end of a very short time, a complete cicatrization of the ulcers, with the total removal of the small scabs with which they were covered.

The success of these two trials led Mr Toggia to have recourse to the use of this fluid with the human body. A young man, about eighteen years of age, had a sore upon the tibia, which had been treated for a considerable time by an able surgeon ; who had employed, without effect, these remedies which seemed best suited to the state of his patient. The ulcer, which was in some parts livid with much proud flesh, and highly inflamed edges, had produced a swelling of the whole leg, and was attended with much pain, and an almost insupportable itching. The effect of the application of the gastric juice to the ulcer in this state seemed, for the two first days, to be merely that of a powerful digestive : but afterwards, it induced



ced a laudable suppuration, and the ulcer, soon entirely freed from all the troublesome circumstances which have been described, was in no long time happily cured.

To these remarks by Mr Toggia, are subjoined the observations and experiments made by Mr Carminati, Professor of Medicine and Surgery at Pavia. His researches on this subject are, we are told, put into such a state, that they will soon be published by themselves; and will compose a book, not more original for its subject, than interesting from the mode of investigation. But he has had the goodness to communicate to Mr Senebier a sketch of his work, with which we are here presented.

His book is divided into seven chapters: In the first of these, he treats of the effect of the gastric juice on sores, and in cases of gangrene. He proves, in the first place, that the gastric juice of the black and ash-coloured crow, which may be considered as omnivorous animals, since they are equally supported upon flesh and upon vegetables, produces by itself, on those ulcers which are bathed with it by means of a feather three or four times a-day, the effects of an excellent, deterfive, antiseptic, and cicatrizing

remedy ; and that by means of it he cured an obstinate foetid ulcer in the leg of an old cachectic woman. He observes, that the effects above described were produced without the aid of any other remedy, either external or internal ; and that it occasioned no pain to the patient, excepting a slight and transitory feeling of heat, for the few first dressings.

He has found, that the succus gastricus of carnivorous animals, and particularly of the Heron, the Kite, and Falcon, possess all these properties in a still higher degree ; and altho' for the first days it occasions a greater degree of pain and heat than the gastric juice of the crow, yet that it cleanses and cures ulcers more readily. This he has found on the treatment of five different old callous and foetid ulcers, the cure of all which was rapid and complete.

In this chapter he also shews, that the succus gastricus of omnivorous and carnivorous animals, is an excellent remedy in syphilitic and scrophulous sores. And he tells us, that he has cured, by means of the succus gastricus, at least three different persons, of irregular, putrid, and callous ulcers of this kind, which had resisted

sifted every remedy he could before think of.

He has found, that the *fuccus gastricus* is no less useful in cases of gangrene; three instances of which he had cured by this article alone, although they were considerably advanced. The *fuccus gastricus* of the animals above described had in these cases the effects of stopping the progress of the gangrene, of separating the dead parts, of correcting the fœtor, and of producing a cure of the ulcer, formed by the removal of the mortified flesh.

And finally, he found that the *fuccus gastricus* of carnivorous animals produced excellent effects on a cancer of the face; in cleansing the bottom of the ulcer, in sweetening the ichorous and corrosive fluid which it discharged, in removing the disagreeable smell, in diminishing the acute pains, and in stopping the farther progress of the sore.

In the second chapter, he treats of the use of *fuccus gastricus* in cases of contusions, tumours, and other external complaints.

Several experiments which he made serve to shew, that the *fuccus gastricus* of herbivorous ruminant animals, particularly of bullocks,



calves, and sheep, applied externally, has removed pains of the chronic kind, every time that the use of resolvents is indicated. This appeared by the cure of two women, one of which had an obstinate pain of the left shoulder, and the other a constant pain, more or less acute, in the right arm.

He has employed the *succus gastricus* with great advantage; not only in contusions of the skin, but in these also affecting the muscles. This appeared from its use in a contusion on the left side of the head, about the origin of the temporal muscle.

The resolvent power of the gastric juice has also been demonstrated by the good effects which it produced on tumours of the lymphatic kind. An œdematous swelling of the eyelids, and likewise an hydrocele, were dissipated by the mere application of the gastric juice of ruminant animals; and the same effect was obtained from this fluid when applied to inflammatory and scrophulous humours. The *succus gastricus* of carnivorous and omnivorous animals proved also an excellent resolvent. It discussed, with facility and promptitude, venereal swellings and indurations of the inguinal glands; and

and it softened and removed, in a very short time, callosities on the feet and hands produced by external compression, although hard, painful, and of long standing.

In the third chapter he relates trials made with the succus gastricus in diseases of the stomach, and in fevers of the putrid and intermittent kind. He there shews, that the internal employment of the succus gastricus, which is the principal agent in digestion, is useful in all those affections of the stomach produced by faults in this fluid, and particularly by its diminution in point of quantity, and want of energy for the purposes of digestion. He has cured, by means of this remedy alone, three women affected with swelling of the stomach, a sense of languor and even acute pain, during the time of digestion. He cured also, by means of it, two young men subjected to a distressing and painful oppression at stomach, occasioned by their having eat too great a quantity of meat and eggs. Its effect was very remarkable in the case of a woman subjected to a gradual emaciation for the space of several months. She was affected with continual nausea and vomiting. This vomiting was of a very bitter and

black matter, especially after taking drink. These complaints probably proceeded from a scirrhus tumour, which could evidently be felt in the right hypochondrium, and which produced even some manifest external swelling. Every time that this woman took an ounce of the succus gastricus of a ruminant animal, during the course of the day, she was for the succeeding night entirely freed from the nausea and vomiting. These complaints, however, began again as soon as she suspended the use of the succus gastricus.

In cases of weakness and pain of the stomach, produced by an atonia of that viscus, and by affections of the nervous and convulsive kind, the succus gastricus was found always to be useless. In fevers depending on the stomach, the succus gastricus of sheep proved always useless, and even dangerous; although administered only after the evacuation of the primæ viæ, and when the stomach was soft. The succus gastricus of carnivorous animals appeared to be more suitable in these fevers. It seemed to resist the farther corruption of matter placed in the primæ viæ; but it was by no means sufficient for correcting and evacuating them, and seemed  
even



even to be hurtful where it retarded or diminished the evacuation by the intestines.

The succus gastricus seemed to have some effect in removing intermittent fevers. Two autumnal tertians, which had continued till spring, and six vernal ones, were cured by the use of the succus gastricus alone, taken at the utmost to the extent of three ounces. In the intermittents of August and September, which are the most difficult to cure, the succus gastricus had sometimes the effect of a febrifuge, when employed in large dozes. But it was by no means entitled to the name of a specific, for it was not able to cure a mild quartan, and simple tertian, which very soon yielded to the Peruvian bark. These fevers, however, seemed to be much diminished by the employment of the succus gastricus of carnivorous animals, and thus did not resist even a very small doze of the bark.

The subject of the third chapter is an examination of the succus gastricus of carnivorous and herbivorous animals, both of the non-ruminant and ruminant kind, in the humid way. This examination proves, that these fluids differ considerably from each other.

The

The succus gastricus of carnivorous animals, particularly of Herons, Kites, Falcons, and Owls, though differing considerably in density and colour, has always a salt and bitter taste, with some evident marks of acidity ; and it contains, besides water, a very bitter resinous matter, of a dark colour, with a penetrating and peculiar smell ; an animal substance of the same colour, a small quantity of sal ammoniac, and a larger portion of sea salt.

The succus gastricus of omnivorous animals, particularly of Cats, Dogs, and Crows, when fed both on flesh and vegetables, he found to be a neutral ; but when they were fed entirely on flesh, their succus gastricus was found exactly to resemble that of carnivorous animals. As well as these, he found that the succus gastricus of human species was composed of a large quantity of watery fluid, of a peculiar animal substance, and a small proportion of marine salt.

The succus gastricus of herbivorous animals, not of the ruminant kind, as of Rabbits and Hogs, appeared to be acid. Besides water, it contained an animal substance, and a small quantity of marine salt.

The succus gastricus of herbivorous ruminant  
animals

animals he found to be composed of the same principles, excepting, that these contain a small proportion of ammoniacal salt, and that they are always acid. He has, indeed, found the succus gastricus of sheep and goats, after being long taken from the animal, whether dead or alive, so far alkaline as evidently to effervesce with acids. But this he considered as being a quality entirely foreign to the gastric juice itself, and the mere effect of the putrefaction of these herbs, which had for a long time remained in the stomach of these animals.

The subject of his fifth chapter is an examination of the succus gastricus of different animals, by the dry way.

The products of distillation from the gastric juice of carnivorous animals, he found to be a large proportion of water, or acid, and some drops of a thick acrid oil, adhering to the neck of the retort, with a saline substance, which gave out the smell of volatile alkali, when mixed with the vegetable alkali, or quick-lime. The caput mortuum subjected to filtration and evaporation, furnished some chrystals of sea salt. And when the residuum, after filtration, was  
burnt



burnt and philogifticated, to see whether it contained iron, a pure calcareous earth was found.

The succus gastricus of omnivorous animals, among which is to be reckoned that of man, on some occasions yielded, on distillation, water with an alkaline quality. This, however, was probably the effect of an alteration in the fluid; because, in all these cases where he was certain that the fluid was pure and fresh, he obtained always an insipid water. After the water came over, he obtained a small quantity of black acrid oil, and the residuum, or caput mortuum, did not differ from that of carnivorous animals.

The products found, on the distillation of the succus gastricus of herbivorous animals of the non-ruminant kind, were water at first a little alkaline, and then acid, and a black acrid oil. The caput mortuum furnished fixed alkaline salt in a very small quantity, some sea salt, and calcareous earth. The succus gastricus of ruminant animals yielded, on distillation, a water at first alkaline, and then acid; although in the humid way it appeared always to be acid. On concentrating this water, Mr Carminati collected a small quantity of this acid, which appeared to be an animal acid. The distillation farther furnished,

furnished, in some cases, a small quantity of sal ammoniac, which however all the distillations did not yield. A small quantity of empyreumatic oil was obtained, and the residuum resembled that of herbivorous animals not of the ruminant kind.

Lastly, the gastric juice of ruminant animals examined in its alkaline state, yielded in some cases, for its last product, a very small quantity of acid, but commonly an alkaline water came over during the whole distillation. The oil and caput mortuum were exactly similar to those obtained from the succus gastricus of non-ruminant animals, and of ruminant animals when that fluid was evidently acid.

In the sixth chapter, he relates experiments on the antiseptic power of the gastric juice of different animals.

The succus gastricus of carnivorous animals, put into a small open glass vessel, and exposed to the heat of different seasons, was always preserved sound, and without putridity, till it was completely dried. The succus gastricus of carnivorous animals also remained for a long time without any putridity. It was not even corrupted at the end of several months.

The succus gastricus of herbivorous animals,  
of

of the non-ruminant kind, and that of ruminant animals when acid, enjoyed the same properties ; but when it was alkaline, it corrupted very speedily, and that in proportion to the degree of heat to which it was exposed, and to its alkalineffence.

The succus gastricus of carnivorous animals mixed with the blood, and put upon meat, whether fresh or tainted, gave proofs of its antiseptic power, both in preserving from corruption, and in correcting a taint. And their action was always more certain and immediate, in proportion to the quantity of gastric juice added to these putrescent matters.

The succus gastricus of omnivorous animals, comprehending that of the human species, was found to be preserved very well alone ; and in this respect it differed nothing from that of carnivorous animals ; but when mixed either with sound or corrupted meat, and with fresh or putrid blood, it appeared to promote the septic tendency as much as water.

The succus gastricus of herbivorous animals, not of the ruminant kind, gave the same marks of antiseptic power with that of herbivorous animals. And this was also the case with the  
same



same fluid, when obtained from herbivorous ruminant animals, if of an acid quality; but when alkaline, it appeared always to promote the septic tendency.

This chapter is, we are told, terminated by the relation of some cures, both of internal diseases and ulcers, performed by means of the *sucus gastricus* of ruminant herbivorous animals, when of an acid quality. From which it appears, that while it can be more easily procured, it may be substituted to that of Owls and Herons.

The last chapter contains experiments on the human gastric juice, combined with different remedies from the mineral kingdom. This fluid was found neither to dissolve copper, cinnabar, nor sulphur; but it dissolved iron, antimony, flowers of zinc, and corrosive sublimate.

To this account of the observations and experiments made by Messrs Jurine, Toggia, and Carminati, our author subjoins a few reflections. After the facts which have thus been verified by three different observers of nature, who had no concert with each other, and whose conclusions were uniform, there can, he thinks, be no doubt of the great utility of the gastric juice in the cases mentioned, and of its being a re-  
medy

medy free from every inconvenience. And he particularly recommends its being tried in the manner mentioned by the last of these gentlemen.

It is indeed true, he observes, that for this purpose Crows, and other birds of prey, must be procured. But he thinks it an object of such importance, as to engage some persons to feed these animals for the sake of gain. Crows may be nourished on almost any food that can be given them ; and for obtaining their gastric juice, it is only necessary to make them swallow small pieces of sponge, with threads fixed to them. After these have remained in the stomach a sufficient time to be impregnated, they are to be drawn back, and the fluid expressed from them. This operation may be repeated with each Crow six or eight times between every meal. He thinks that these, and other birds of prey, might particularly be kept in hospitals, where there must necessarily be many offals for their nourishment, and where they might be taken care of by particular patients. And as the gastric fluid of these birds can be kept for a very long time, without suffering any alteration, what is not necessary for present use



use might either be preserved for future occasions, or sent to those places where it could not be so easily procured.

The treatise before us is concluded with an account of some experiments made by Abbé Spallanzani on the subject of digestion, in addition to those formerly published in his ingenious dissertations, and of which we gave some account in the tenth volume of our first decade. He has found, that the muscular strength of the stomach in pigeons is by no means great when they are very young, and still in the nest, but that it increases as they advance in life. He has found, that, as well as in fowls, the digestion in pigeons in no degree depends on their swallowing stones.

Upon a comparison of the antiseptic power of infusions of Peruvian bark, flowers of camomile, myrrh, and Virginian snake-root, with the gastric juice of a crow, he found that the latter fluid, not only preserved a portion of veal in a perfectly sweet state for a much greater length of time, but had also the effect of dissolving part of it.

When Abbé Spallanzani formerly made his experiments on fishes, he had an opportunity of employing only those fresh water fishes which



were to be met with in the neighbourhood of Pavia ; but he has now made many experiments on different sea fish, taken both in the Adriatic and Mediterranean ; and he found flesh very readily dissolved in tubes introduced into their stomachs. It appeared, however, that in some of them which have muscular stomachs trituration is necessary, by way of preparation, in the same manner as in fowls, but that it is by no means the efficient cause of digestion.

In addition to his fourth dissertation, on the digestion of Owls, Falcons, and Eagles, Mr Spallanzani has now found, that the gastric juice of the Owl has the greatest energy when they have fasted for some time. And altho' he formerly found, that the gastric juice of the Falcon did not dissolve leguminous, or similar fruits ; yet he has now discovered, that it easily dissolves bread, when previously chewed ; from which he concludes, that these, in place of carnivorous, may become frugivorous animals.

Dr Haller, and others, have asserted, that the breath of the Eagle has a very foetid smell. But after a very great variety of trials, in which an opportunity was afforded of putting his nose close to the bill of the animal, neither he, nor  
others,

others, were able to discover even the slightest putridity.

He has made several experiments, in addition to his fifth dissertation, on digestion in the stomach after death. He killed a Rabbit, after it had fasted for eighteen hours ; and immediately introduced into its stomach an ounce and a half of moistened bread. At the end of six hours he opened the animal. The bread in its stomach was by no means in its natural state ; it was become a viscous mass, and had lost about a third of its weight. And this portion of it was found, at the upper part of the duodenum, converted into chyme.

In farther proof of the antiseptic power of the gastric juice, of which he had formerly treated in his sixth dissertation, he has found, that this fluid, as obtained from fowls, Eagles, Falcons, Owls, and Dogs, may be preserved in bottles for several weeks without acquiring the slightest putrid taint.

Though these additional experiments by Mr Spallanzani are not perhaps to be considered as immediately connected with the employment of the succus gastricus for medical purposes, yet they serve at least to throw some additional light

upon the subject And if this fluid in the hands of others shall be productive of the same consequences which have resulted from the trials of Messrs Jurine, Toggia, and Carminati, it may justly be considered as a discovery of the highest importance in medicine, and for which we are principally indebted to his ingenious labours.



## II.

Henrici Josephi Collin, Scar. Cæsareo-Reg. Apostol. Majest. Regimin. Infer. Austr. Consiliarii et Nosocom. Pazmanniani Physici Ordinarii. Hollandicæ Scientiarum Academiæ, quæ Harlemi est, Membri. LACTUCÆ SYLVESTRIS CONTRA HYDROPEM VIRES. 8vo. Viennæ.

NO one conversant in the practice of medicine can have any doubt that dropical affections arise from very different causes, and that many cases of this disease are incurable by any remedy that can be employed. It is also well known, that after remedies esteemed the most powerful have failed, others have succeeded. This is, in an especial manner, the case with respect to diuretics. All of them seem by no means to be equally accommodated to every patient; nor in every instance to produce the desired effects. It will not therefore be denied, that Dr Collin has done a very acceptable service, both

to practitioners, and to hydropic patients, in his attempt to investigate and demonstrate the diuretic powers of the *Lactuca Sylvestris*. And if this remedy, given in the manner which he directs, shall be productive of similar success in the hands of other practitioners, it may justly be considered as a very valuable addition to the *Materia Medica*.

This species of the *lactuca* indeed had been in use at a very early period of medicine; and is recommended even by Dioscorides, not only as a remedy for evacuating the water in dropsy, but also for restoring the menstrual discharge, and for the cure of several other affections. But of late it has been so little employed, as not even to have retained a place in any of the best modern pharmacopœias. In this, however, it has suffered only the same fate with many other active and useful medicines, which from different accidents have fallen into undeserved neglect.

Dr Collin sets out, by giving a description of the plant, and mentioning the synonymina employed for distinguishing it by different authors. It is, he observes, the *Θυδαξ αργεια* of Dioscorides, the *Lactuca Atra* of Pliny, the  
*Lactuca*

*Lactuca Sylvestris* of Mathiolus and Fuschius, and the *Lactuca Scariola* of Linnæus.

He gives the following description of the different parts of this plant.

**RADIX** albida digiti minoris ferme crassitie ex capite nodoso ramose divaricata fibrosa annua.

**CAULEM** promit bi-aut tricubitalem rectum, simplicem, rarissime nisi interdum in locis cultis, ramosum inferne rubellum, cæterum ex albedo virentem, glabrum, & ab infra ad unam fere tertiam aculeis tenellis obsitum. Hic.

**FOLIIS** vestitur alternatim positis caulem amplexicantibus, inferioribus (una alterove) oblongis integris ex angustia sese dilatantibus, denticulatis, in planta adulta facile macrescentibus & deciduis; reliqua folia caulem ornantia sunt sinuato laciniata, venoso-reticulata, coloris glaucini, glabra, costa vero dorsali aculeata, margine spinulosa, omnia in caule plus minus ita torta ut margo alter cælum alter terram quodammodo spectet; in suprema parte caulis dividitur in paniculam.

**FLORIBRUS** plurimis flavis brevissime pedunculatis superbientem, quarum.

**CALYX** communis subcylindricus ex squamu-



lis plurimis imbricatim positis conflatur, cui infidet.

COROLLA uniformis, ex corollulis monopetalis ligulatis hermaphroditis æqualibus composita, harum quælibet.

STAMINA continet quinque filamentis constantia, brevissimis capillaribus, liberis; antheris vero in tubulum cylindraceum connatis, per quem.

STYLUS transit filiformis eminentibus duobus stigmatibus reflexis, singulorum horum.

GERMINA subovata abeunt in.

SEMINA solitaria compressa, rugoso striata, obscuro cinerei coloris, nigroque maculata.

PAPPO simplici piloso, stipitato coronata, quibus delapsis.

Receptaculum remanet nudum.

We have reckoned it the rather necessary to present our readers with the full description given by the author, as it is doubtful whether the plant which he has employed be not rather the *lactuca virosa* of Linnæus than the *lactuca scariola*. He observes, that, when wounded, it pours out a large quantity of acrid, bitter, milky juice, having a very strong smell, even of opium itself. And he adds, that the specific character of the two species is so uncertain, that they have been

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considered by Haller, Gerard, and others, as being merely varieties of the same species ; while this plant, on account of the narcotic odour, which it gives out, may be, he thinks, justly distinguished by the epithet of virofa.

It grows, he tells us, abundantly about the neighbourhood of Vienna, both in cultivated and uncultivated situations, by the sides of highways, of meadows, and in many other situations. It flowers in August ; and with those who collect it, care need only be taken that it be not confounded with the *sonchus oleraceus*, to which it has a considerable resemblance.

He gives the following directions for preparing the extract of this plant. Let the juice expressed from the recent plant be kept for twenty-four hours in a low cellar, or some similar cold situation, that it may not run into a state of fermentation. Let it then be poured off from the sediment, boiled for a few minutes, and afterwards strained. Let a quantity of the whites of eggs be added to the strained liquor ; after which it is to be gently boiled again, and strained a second time. Let it then be evaporated to one half over a gentle fire. Upon being removed from the fire and cooled, a second portion  
of

of the white of eggs is to be added to it ; and after boiling for a short time, it is to be again strained thro' linen ; after which the clarified liquor is to be slowly evaporated over the fire to the consistence of an extract. In this manner we are told that the best extract is obtained, and that it will often shine with saline spiculæ.

Unless the season happens to be very wet at the time of collection, it passes very difficultly thro' linen when filtrated. But, by the process above described, a sufficient depuration is, we are told, obtained. If, for the sake of gain, the Apothecary shall neglect the due depuration, he will indeed obtain a greater quantity of extract, but in a less active state. To obtain the same effect, it will require to be exhibited to two or three times the quantity of the pure extract. Besides which, it is much more apt to excite sickness at stomach. For the saline principle upon which the virtue of this plant depends, is intimately united with many inert earthly parts, from which it can only be freed by careful depuration. Altho' both the young and old plant, provided it be not deprived of juice, are by no means void of active powers ;  
yet



yet the best time for collecting it, with a view to the preparation of the extract, is just before it begins to flower ; for then it may be considered as being in its most active state.

After these directions respecting the preparation of this medicine, Dr Collin relates the history and progress of twenty-four cases in which he employed it. Without pretending to give an account of all these, we shall select a few of the most remarkable.

The first case related is that of a labourer in the thirtieth year of his age, who, till that period, had enjoyed almost uninterrupted good health. But he was detained in prison for about half a year. From the commencement of his imprisonment, he was almost entirely deprived of appetite and sleep. He quickly lost his strength, and in the beginning of July 1771 he was seized with a diarrhœa.

With these complaints, and an œdematous swelling of his inferior extremities and face, he was brought to Dr Collin, at the hospital, on the 29th of July. He endeavoured, by means of rhubarb, myrabolanes, and even the root of the arnica, to restrain the diarrhœa ; by which the strength of the patient was gradually

dually wasted. But, under these remedies, a general anasarca affected his whole body. Water began to be collected in the cavity of his abdomen; and, excepting squills, which his stomach would not bear in any form, every other diuretic renewed and increased the looseness, which threatened to prove fatal to him.

Notwithstanding the diligent use of almost all these remedies, which seemed most likely to be serviceable to him, his belly, by the beginning of September, was swelled to an enormous size, and his scrotum was as large as the head of a man. His anasarca was very much increased, his thirst insatiable, and he took no food, unless in consequence of the most earnest intreaties. His respiration was much affected, and for ten days together he lay in a supine posture, discharging every thing in bed, and expecting death with indifference.

On the 7th of September, laying aside the use of all other remedies, Dr Collin prescribed for him a pill, containing two grains of the extract of the *lactuca virosa*, to be taken four times in the day. On the morning of the 8th of September he found him less anxious; and upon visiting him again the same evening, he  
learnt

learnt that he had twice called for the pot to discharge water, and had been affected with no looseness during the course of the day. His urine, which was kept in two separate glasses, amounted to about twelve ounces, and was of an opaque dark colour, after having deposited a considerable quantity of blackish sediment. Before midnight, he again discharged upwards of two pounds of the same urine.

He now began to take double his former dose of the extract of lactuca, and by eight o'clock next morning he had discharged six pounds of yellow coloured urine, containing only a cloud, which sunk to the bottom. His respiration was much relieved, and his stupor considerably diminished. During the course of the day, he had one stool in bed, but of a less thin consistence; and by nine in the morning on the 10th of September, he had discharged fourteen pounds of urine, of a light yellow colour, and containing only very little cloud.

The swellings over his body were evidently more soft; he answered much more readily the questions put to him; he rejoiced at the diminution of his thirst, and expressed a desire for food.



food. He had a small stool, in which the excrement had a formed appearance, and was of a dark colour. He had now refreshing sleeps, and expressed some solicitude for his recovery. A small quantity of wine was given to him at his own request ; and his medicine was increased to the extent of twenty grains in the course of the day.

On the morning of the 11th of September Dr Collin found that he had discharged twelve pounds of urine during the course of the preceding night ; that his appetite was much increased ; that he was entirely free from thirst ; that he entertained great expectations of recovery ; that his abdomen was much softer, and the swellings in other parts of his body much fallen.

After this, under the dose of the medicine already mentioned, he continued to discharge daily, fourteen, fifteen, or sixteen pounds of urine ; and, under this discharge, all his symptoms were much alleviated ; so that by the 20th of September he was entirely free from all dropsy. On this account, he took only twelve grains of his extract, and was ordered to take  
half

half a dram of the Extract, Mart. Pomat. And by the 29th of September he gave up his hydropic extract altogether, continuing only his other medicine. From the beginning of his recovery, he was furnished with nutritious food, and some wine ; under which he regained his strength, flesh, and colour so fast, that by the 8th of October he was dismissed from the hospital. And long after this, Dr Collin had the satisfaction of seeing him in the street in perfect health.

In the second case we have an account of the employment of this remedy in a dropsy of long standing, which had resisted a variety of different modes of cure. In this case, the swelling, which was very considerable, and extended over the whole body, was remarkably hard, and scarcely bore the impression of the finger. The patient, in other respects, was in the most distressful circumstances imaginable, and in the most imminent danger, when recourse was had to the extract of the lactuca. For the first four days, he took it only to the quantity of ten grains, but without any effect. The dose was then increased to twenty grains daily, when it had very considerable influence in augmenting

the quantity of his urine. Gradually additions, however, were still made, till he took one dram and a half every day; and in no long time afterwards he was dismissed entirely free from all his complaints. In this case, towards the latter part of the treatment, besides the increased discharge by urine, the patient had also a copious sweat extended over his whole body, and a very free expectoration of a large quantity of viscid mucus.

The third case described is an instance of dropfy succeeding an intermittent. In this case the disease was accompanied with jaundice, and with a very considerable painful swelling in the left hypochondrium, which was supposed to depend on an enlargement of the spleen. Here the extract, taken to the extent of a dram and a half in the day, had the effect of producing a discharge of nine or ten pounds of urine every twenty-four hours, and in about three weeks the patient was completely cured.

In the fifth case, recourse was had to the lactuca in an obstinate dropfy, after the trial of colchicum, and a variety of other remedies to no purpose. When this was given to the extent of four scruples in the day, he discharged from  
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ten to eleven pounds of urine; and considerable anasarcaous swellings, with which he had been affected, were entirely removed. But the swelling of his abdomen, with great difficulty of breathing, were in no degree diminished; and he died, after he had used the remedy for some weeks.

Upon opening the body, both sides of the thorax were found filled with water. In the left lobe of the lungs were many hard tubercles, almost of a cartilaginous consistence, three of which were each of them as large as a walnut. The liver was of an ash colour, and very much hardened. The gall bladder was empty. The spleen was triple its natural size, and seemed to be distended with black blood. The whole pancreas was in a schirrous state. The colon was very much distended, and the kidneys remarkably soft.

The ninth case is that of an unmarried woman in the 36th year of her age, who was brought to the hospital labouring under universal anasarca, with a large collection of water fluctuating in the abdomen. She had never enjoyed good health from infancy, and particularly after the small pox and measles. She had

been frequently affected with cutaneous eruptions, and had always a cachectic appearance.

Her menses appeared in her sixteenth year, but were very irregular, and of a sanious matter. These were succeeded by fluor albus, continuing till she was twenty years of age. Then her menses returned; but they were neither more regular, nor of a better appearance than before. Three months after the cure of the fluor albus, a tumour appeared on her right foot, which terminated in suppuration, and was not healed till it had continued for about nine weeks. This was succeeded by several others of the same kind, in different parts of her body. At length she became affected with a very great sense of weight in the epigastric region; which altogether prevented her from being able to lie horizontally, produced a sense of dilaceration, and rendered deglutition very difficult. In this condition, and affected with the dropical symptoms, she was brought to the hospital. She had then a most distressing thirst, and very scanty discharges both by stool and urine.

On the first of January, after a trial of saline purgatives without any benefit, she began the  
extractum

extractum lactucæ, and by next morning she had discharged about two pounds of urine. The extract was gradually augmented, and her urine increased; so that by the 8th it amounted to twenty-six pounds in the day. Her anasarca had now entirely disappeared, and the ascites was almost removed. Her liver was now found to be so much swelled as to fill the whole epigastric region, and still prevented her from lying on her sides. But under the continued use of the medicine, which still supported a copious discharge of urine, though not to the same extent, conjoined with dry friction twice a-day, the size of this tumour was gradually diminished; in so much, that by the 27th of February neither Dr Collin, nor five other physicians who examined it in conjunction with him, could discover any thing preternatural. She could now with ease bear every posture, her appetite became remarkably keen, and by the end of March she left the hospital in perfect health.

The other cases which are recorded in this treatise, although affording very remarkable examples of the removal of obstinate dropsies, yet do not exhibit any thing so far different from these which have already been mentioned,



as to require particular notice. And the author observes, that besides the twenty-four cases related in this treatise, he has cured thrice that number by means of this remedy. But trusting that the cases related are sufficient to shew the powers of this remedy, he has withheld the others, that he might not swell the volume to too great a length. And he concludes it with some general corolaries drawn from his practice with regard to its use.

The extractum lactuæ sylvestris is, he observes, a very mild remedy, and friendly to the stomach. When exhibited even in large dozes, it creates no uneasiness to the patient; it even renews an impaired appetite; and by dissolving, as he alledges, the tenacity of the lymph, gives it a free passage through the small vessels, and thus quenches and diminishes thirst in many hydropic cases.

Though it for the most part keeps the belly gently open, yet it does not excite diarrhœa. And from its employment besides diuresis, a diaphoresis is also produced; which in some particular cases is very copious, and gives great relief.

It dissolves glutinous matter obstructing the viscera,

viscera, and renders them fit to be discharged by the urinary passages, by the skin, or if they have been situated in the lungs, by expectoration. It successfully removes jaundice arising from such a cause with hydropic patients, and supplies the place of bile. And when dropfy arises from this disposition of the fluids, it happily cures it without any inconvenience to the patient.

When dropfy arises from laxity of the solids, and dissolution of the fluids, it is not, he tells us, so certainly, easily, or expeditiously cured by any other remedy.

But when an inflammatory spissitude of the humours, in which antiphlogistic remedies have been too long neglected, has produced obstruction of the viscera, attended with dropfy, it is not of service. Nay, from some observations, he was inclined to think, that its long continued use has proved hurtful. For it is, he observes, a remedy gently corroborant, irritating, and antiseptic; and hence he thinks ill fitted for an inflammatory disposition of the fluids.

When Dr Collin first began this remedy, on the removal of the dropfy, he exhibited other tonics; but these he afterwards found to be rarely

ly necessary. For, by a proper diet, and the continuance of the remedy for some time, his patients were with greater safety restored to strength, than by the employment of astringents; from which he often saw obstructions of the viscera rather increased, if these were given before their complete removal. He does not however deny, that some cases occurred to him which required corroborants of different kinds, to strengthen the body.

The dose of the extract of the *lactuca sylvestris* must be varied in different patients. In drop-sies, attended with a dissolution of the fluids, and laxity of the solids, it is required in the least doses. And these causes, he tells us, will in general be successfully cured by employing it to the quantity of a scruple, or half a dram in the day. If, however, there be long-continued obstructions of the viscera, even in these cases larger doses are required.

In drop-sy arising from a cold lentor of the humours, it requires to be exhibited in doses from one to three drams. But if this quantity of good and properly-prepared extract does not succeed, the cure of the patient is not, he tells us, to be expected by this remedy. At the  
same



same time, if the extract be given even to the quantity of an ounce, although it excite nausea, yet it will not, he affirms, be productive of any other inconvenience to the patient. Its use, however, in such cases, is not to be persisted in, to the neglect of other remedies better accommodated to the cure.

To hydropic patients affected with thirst, Dr Collin, when using any diuretic medicine, always directs the exhibition of a sufficient quantity of drink ; taking care, however, that they do not overload the stomach by using too great a quantity at once. For the water effused into cavities, though bland, does not dilute the mass of fluids from which it is already separated. It cannot here be absorbed in sufficient quantity ; for in this disease the absorbents are languid in their action, which indeed is to be considered as the chief cause of the collection of water in the cavities. But if, on the other hand, the effused waters have contracted an acrimony, their absorption augments thirst, excites fever, and induces many other inconveniences. And unless these are counteracted by the free use of diluent and demulcent fluids,

inflammations of the worst kind, gangrene, and even death itself, are to be apprehended.

The advantages of the free use of liquids in many dropfical cases, is already confirmed by testimony of different practitioners. But how far the lactuca is really entitled to the character which Dr Collin gives it, must be determined by future experience.

## III.

*A Treatise on the Venereal Disease, by John Hunter.* 4to. London.

**I**N this work are contained many opinions which have a just claim to attention; not merely from novelty, but also from importance and ingenuity. - When however it is considered, that these occupy a quarto volume of considerable size, it is not to be expected, that within the narrow limits, which we must here prescribe to ourselves, a full or particular account can be given of all of them. Referring those, therefore, who want a farther gratification of their curiosity, to the work itself, we shall here content ourselves with presenting to our readers a short view of the most interesting particulars, and especially those which respect the novelties or improvements which the author has introduced into practice.

To this work is prefixed an introduction, in  
which



which the author gives an explanation of some terms which he has afterwards frequent occasion to employ. He divides sympathy into universal, and partial ; and the latter again is subdivided into remote, continuous, and contiguous. He strenuously contends, that diseased actions are incompatible with each other. It appears, he thinks, beyond a doubt, that no two actions can take place in the same constitution, nor in the same parts at one and the same time. He therefore affirms, that the idea of itch, of scurvy, and the venereal disease being combined, is founded in ignorance. He infers, that the power of resisting many infections, arises from a person having at the same time some other disease, and therefore being incapable of a new action ; and that the cure or suspension of one disease by another, depends on the same principle.

This is unquestionably an important doctrine in practice ; and that it is true to a certain extent, is highly probable. But what happens with regard to proper fever, or febrile contagions, is by no means applicable to all other diseases. It cannot be denied, that a person labouring under scrophula to a high degree, is still readily susceptible of the contagion of syphilis.

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And that he who is subjected to the latter disease, is still no less liable to be acted upon by the contagion of psores, than if he was in a state of perfect health; while at the same time the supervening disease has no influence, either in suspending or removing the preceding one. On the contrary, in many instances where such complications occur, the removal of either is rendered more difficult. This is particularly exemplified in those cases where scrophulous patients allow syphilis to run on for any length of time, of which Mr Hunter himself is fully aware, as appears from many parts of his work. Although therefore the term *pocky itch* may often be very absurdly employed, yet we cannot help thinking, that Mr Hunter has gone too far in asserting that the idea is entirely founded on ignorance. The general principle here laid down may, we think, lead to many erroneous conclusions.

Mr Hunter, after stating his sentiments respecting diseased actions being incompatible with each other, endeavours to show, that parts affected take on action more readily, and go on with it more rapidly, when near the source of circulation, than when far from it. He contends, that there are some parts more susceptible

of specific diseases than others. And he observes, that the skin, throat, and nose, are more readily affected, by lues venerea, than the bones and periosteum; which, on the other hand, suffer sooner than many other parts; particularly the vital parts, which he thinks are not susceptible of the disease.

He next offers some remarks on inflammation, pointing out three different species of it. That which unites parts he styles the adhesive inflammation; that which forms pus, the suppurative; and that which removes parts, the ulcerative inflammation. Mortifications he considers as of two kinds; the one preceded by inflammation, the other not. But, as far as that state occurs in this disease, it is entirely of the former kind. He considers inflammation as an increased action of that power of which a part is naturally in possession. This increased action, in healthy inflammations at least, he thinks, is probably attended with an increase of power; but in inflammations which terminate in mortification, there is no increase of power. On the contrary, there is, he thinks, a diminution of power, which, joined to an increased action, becomes the cause of mortification,



tion, by destroying the balance which ought to subsist between the power and action of every part. Upon these principles the Peruvian bark is, he thinks, the only medicine that can be depended upon; as it increases the powers, and lessens the action. But, upon many occasions, opium, he thinks, may be of singular service; by lessening the action, although it does not give real strength. And he has seen good effects from it, both when taken internally in large dozes, and when applied to the part.

After this introduction, Mr Hunter next treats of the venereal poison, and of its first origin. He seems rather inclined to adopt the opinion of those who suppose that the disease was not brought from the West-Indies. Man, he observes, is susceptible of more impressions, that become the immediate cause of disease, than any other animal; and is, besides, the only animal which can be said to form artificial impressions on himself. Hence he thinks, that he is subject to the greatest variety of diseases. In one of these self-formed situations, he supposes that the impression was probably given which produced the venereal disease.

To us, this opinion seems not only to be very doubtful, but to be liable to many objections. Into these, however, we cannot propose to enter; and, with respect to the place from whence it was derived, we would only observe, that there can be no doubt of its being altogether unknown in Europe till about the time when their intercourse began with America. While it is equally certain, that when Europeans first visited America, they found that the disease was not only very common in that country, but that it had existed there from time immemorial. This, we are inclined to think, gives a degree of probability of its being derived from America, which any description of similar appearances, at best but vague and uncertain, and as to their dates even doubtful, will never be sufficient to invalidate. And if, in a self-formed situation, the impression was given which produced the diseases; it may justly seem wonderful, why it was not produced in Otaheite as well as in America or Europe. We are, however, certain, that the inhabitants of that, and several other islands lately discovered, were entire strangers to it, till it was imported to them from Europe.

Mr

Mr Hunter observes, that we know no other animal, capable of being affected with this poison. Hence he infers, that it certainly began in the human race ; and, he thinks, that the parts of generation were probably first affected. We know nothing, he observes, of the poison itself ; but that the venereal disease is propagated only by matter, is daily proved by numerous instances. It must either, he observes, be applied in a fluid state, or rendered fluid by the juices of that part to which it is applied ; and he affirms, that there is no instance where it has given infection in the form of vapour.

With respect to differences in the acrimony of the poison, he allows, that it may be so far diluted, as not to have the power of irritation. But, he contends, that if it can irritate to action the part to which it is applied, the action will be the same, whether from a large or small quantity, from a strong or weak solution. This he thinks, is fully confirmed by the analogy of the small pox. He considers it as an erroneous opinion, that gonorrhœa and syphilis arise from two distinct poisons ; and, in illustrating this point, he endeavours to shew, that the venereal disease was carried to Otaheite, not by  
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the English circumnavigators, but by the French. He rejects the idea of any multiplication of the venereal vines, by fermentation in the body; and he considers it as a poison, which, by irritating the living parts in a manner peculiar to itself, produces an inflammation peculiar to that irritation, from which, a matter is produced peculiar to that inflammation. These opinions he supports by reasoning which, it will readily be allowed, is highly ingenious. But we must acknowledge, that with us it has by no means removed every doubt.

The venereal poison may, he observes, affect the human body, either locally, in consequence of its immediate action; or constitutionally, from its being absorbed, and afterwards affecting parts when diffused in the circulation. When it is constitutional, there are produced from irritation many local diseases; as blotches on the skin, ulcers in the tonsils, thickening of the periosteum and bones. When it is originally local, there is either a formation of matter without a breach of solids, called gonorrhœa; or there is a breach of solids, called a chancre. In all these forms of the disease,

great

great varieties occur in different constitutions : in some it is extremely mild, in others extremely violent ; in some its progress is very rapid, in others very slow.

The venereal disease, according to Mr Hunter, often becomes the immediate cause of other disorders, by calling forth latent tendencies to action. In particular countries, and in young people, the tendency to scrophula will be predominant ; therefore buboes in them will more readily become scrophulous. In old people, they may form cancers ; and when they happen in parts of the body which have a greater tendency to cancer, that disease will more readily take place. When the venereal disease attacks the urethra, it often becomes the pre-disposing cause of abscesses. When it attacks the outside of the penis, chancres often ulcerate so deep, as to communicate with the urethra, producing fistulas in the urethra, and often continued phymoses. In this manner then, lues venerea is, he thinks, the cause of other diseases.

After the observations on the venereal poison contained in the first part of this work, Mr Hunter proceeds in the second part to treat of Gonorrhœa. He tells us, that till about the



year 1753, it was generally supposed, that the matter from the urethra in gonorrhœa arose from an ulcer, or ulcers in that passage; but from observation, it was then proved that this was not the case. And he subjoins a short history of the hypothesis of the matter being formed by inflammation without ulceration. In this history, however, he seems to have overlooked the observations made at a much earlier period, by Morgagni; who, to use his own words on the dissection of patients dying while they laboured under gonorrhœa, found nothing morbid. *Nisi quod urethræ interior facies aliquanto humidior apparuit, et rubicundior, quam soleat.*

After giving an account of the different symptoms of gonorrhœa, both in men and women, and of the effects of the disease on the constitution in both sexes, he next proceeds to treat of the cure. The general intention, which he points out in the cure, is to destroy the disposition and specific mode of action in the solids of the parts; and as that is changed, the poisonous quality of the matter produced will also, he tells us, be destroyed. As this disposition and action, however, must of itself terminate in a longer or shorter time, he considers the disease

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as admitting in every case, of what may be called a natural cure. And he is inclined to believe, that medicine is very seldom of any kind of use. Accordingly he has found many patients recover, when he directed only pills of bread; though he believes, that some of them did not get well so soon as they would have done, had artificial methods of cure been employed.

In cases where the symptoms run high, nothing, he tells us, should be done to stop the discharge. The constitution is to be altered by remedies adapted to each disposition, with a view to alter the action of the parts arising from such dispositions, and reduce the disease to its simple form. And when the inflammation is considerably abated, it may be attacked either by internal remedies, or local applications. The internal remedies are principally evacuants and astringents. The evacuants are principally of the purgative or diuretic kind. These, he thinks, under proper management, may, to a certain degree, be useful. But he considers mercury as being no farther serviceable than as it operates as a purgative. Many objections which have been made to astringents he considers as groundless. He believes,

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that they do not, in any case, lessen the inflammation, but they certainly lessen the discharge. And he thinks, that a combination of astringents, especially the specific astringents of these parts, as the balsams, with any other medicine which may be thought of service, may help to lessen the discharge in proportion as the inflammation abates.

Local applications may be either internal to the urethra, external to the penis, or both. Local applications to the urethra may be either in a fluid or solid form. The first of these, or injections, he divides into four kinds; the irritating, the sedative, the emollient, and the astringent.

The irritating he supposes to act by producing an irritation of another kind, and greater than the venereal; by which means, the venereal is destroyed and lost, and the disease cured. They do not, however, agree with all inflammations; and they should never, he tells us, be used where there is already much inflammation. But in cases that are mild, and in constitutions not irritable, they will remove the disease almost immediately. And he thinks, that two grains of corrosive sublimate, dissolved in eight ounces



ounces of distilled, or rose water, is one of the best injections of this kind.

He considers opium as the best sedative we have ; but it will not, he observes, act as a sedative in all constitutions or parts ; on the contrary, it has often the effect of producing great irritability. Lead, while it operates as a sedative, abating inflammation, acts also as an astringent ; and he tells us, that fourteen grains of the *Sal. Plumbi*, in eight ounces of rose water, make a good sedative astringent injection.

Emollient injections are the most proper applications where the inflammation is very great. Thus a solution of gum arabic, milk and water, or sweet oil, will lessen the pain, when the more active injections have done nothing, or to appearance have done harm.

Astringent injections act chiefly by lessening the discharge ; but, as they affect the actions of the living powers, they may, he observes, alter the venereal disposition. They should only, he thinks, be used towards the end of the disease, when it has become mild, and the parts begin to itch. Mr Hunter's experience has not taught him, that one astringent is better than



another. He mentions the astringent gums, oak bark, Peruvian bark, green blue and white vitriols, salts of mercury, and allum ; and he remarks, that on changing the injection, one will sometimes succeed after several others have been tried in vain.

The external applications are poultices and fomentations ; but these can, he thinks, be of little service, excepting when the external parts are in some degree inflamed. Mercurial ointment has often been applied externally, but he is not satisfied of the utility of this practice.

The cure of gonorrhœa in women is nearly the same as in men ; but as the parts affected are neither of so great extent, nor so liable to inflammation, it becomes more simple. Injections are the best means that can be used ; but they may be made double the strength of those used with men.

With respect to the treatment of the constitution in the cure of gonorrhœa, he observes, that in strong and plethoric constitutions, evacuations, particularly bleeding, and gentle purging are necessary ; while it is also requisite to live sparingly, and, above all, to use little exercise. In the weak and irritable habits, in place of  
evacuation,

evacuation, the constitution should be strengthened; and for this purpose, the Peruvian bark may be employed with great advantage. There are, however, cases where evacuations have produced no abatement, and the strengthening plan has been as unsuccessful. With such, he thinks that the soothing plan is the best.

In the treatment of gonorrhœa, it is always necessary, he thinks, to have in view the possibility of some matter being absorbed, and afterwards appearing in the form of lues venerea. To prevent this, he advises small dozes of mercury internally, or the mercurial ointment externally, where the medicine disagrees with the stomach and intestines. Yet he admits, that very few are infected from a gonorrhœa, although they have taken no mercury.

Our author next considers the treatment of what may be called the occasional symptoms of gonorrhœa; particularly bleeding from the urethra, painful erections, chordee, suppuration of the glands of the urethra, affections of the bladder, and swelling of the testicles. As these, however, are the effects only of irritation on the urethra, and therefore not



venereal; they are to be treated in the same manner as if they arose from any other cause.

In gonorrhœa, certain symptoms often remain after the disease is subdued. Such as the remains of the disagreeable sensations excited by the original disease, a gleet, the chordee, the irritable state of the bladder, and the increase and hardness of the epididymis. As the first of these, remaining disagreeable sensations, vary considerably in their nature, no one method of treatment will always be proper. Mr Hunter has known benefit derived from bougies, from gently-irritating injections, and from cicuta. But a blister applied to the perinæum has, he thinks, more effect than any other remedy.

He is inclined to suspect, that a gleet arises from the surface of the urethra only, and not from the glands. In this complaint, we may employ either a constitutional or local method of cure. The remedies employed with the first intention, are either specifics, as the native balsams, turpentine, and cantharides; strengtheners, as the cold bath, and the Peruvian bark; or astringents, as the astringent gums, and salt of steel. The local applications may, he thinks, be divided  
into



into specifics, astringents, and irritating medicines, and such as act by derivation. The specifics applied locally, have a greater effect than when given internally, because they may be applied stronger. And the same observation is, he thinks, also applicable to the astringents. Irritating applications may be used either under the form of injections, or bougies. But these should never, he thinks, be had recourse to, till other methods have been fully tried and found unsuccessful. When they are necessary, as an irritating injection, two grains of corrosive sublimate may be added to eight ounces of water. Bougies however are, he thinks, more efficacious than injections; and a simple unmedicated bougie, is in general sufficient for the cure of a gleet. But it will require application for a month or six weeks before the cure can be depended on. Where it is necessary that they should stimulate otherwise than as extraneous bodies, a little turpentine or camphire is the best mode of medicating them. When other methods fail, a cure may sometimes be obtained by producing an irritation in another part of the body, which shall destroy the mode of action in the urethra, on which the gonorrhœa

hœa depends. Thus, gleans of long standing have been cured by the application of a blister to the under side of the urethra, and by electricity.

For combating a remaining chordee, Mr Hunter recommends the external application of mercurial ointment, joined with camphire. Electricity and the Peruvian bark have also been of use.

The continuance of the irritation of the bladder, is sometimes, he observes, very troublesome. The cure is in general to be effected by opiates, clysters, cicuta, bark, and sea-bathing. Mr Hunter is also inclined to recommend the application of a blister to the perinæum in men.

A remaining hardness of the epididymis will often continue for life; but it is seldom that any bad consequence arises from it. Sitting over the steam of warm water with camphire, and rubbing the scrotum with mercurial ointment, joined with camphire, have sometimes been of service. But in most cases this practice proves inefficacious.

In the third part of this work, Mr Hunter proceeds to treat of different morbid affections, which have been supposed to arise in consequence of gonorrhœa. And in the first chapter,



ter, he considers these diseases which have been supposed to arise in consequence of venereal inflammation in the urethra of men. He begins by treating of strictures, and points out three different kinds of these, viz. The true permanent stricture, arising from an alteration of the structure of part of the urethra ; a mixed case, composed of permanent stricture and spasm, and the true spasmodic stricture.

The true permanent stricture most frequently occurs about the bulbous part of the urethra. Sometimes they are without the bulb, but seldom within it ; and Mr Hunter never saw a stricture in that part of the urethra which passes through the prostate gland. Permanent strictures have their symptoms considerably varied by different accidents. These symptoms are increased by hard drinking, violent exercise, or the retention of urine. But they are particularly augmented by cold weather. A cold day, nay, even an hour of cold weather, will produce a change in them. The cure of the permanent stricture is to be accomplished only by local applications ; either by a dilatation of the contracted part, or a destruction of it, by ulceration or escharotics. Dilatation is performed by  
bougies,



bougies, but is seldom, if ever, more than a temporary cure. The ulcerative process is also affected by the bougie; and the destruction by escharotics is by means of caustics, particularly the lunar caustic. Where a bougie cannot pass, temporary relief is sometimes obtained by the warm bath, and by glysters with opium.

In the introduction of the bougie sometimes great difficulty occurs. In these cases Mr Hunter has sometimes got it to enter by rubbing the perinæum externally with the finger of one hand, while he pushed the bougie on with the other. He has also often succeeded by letting the bougie remain a little while close to the stricture, and then pushing it on. The time for which a bougie should remain in the passage, must be determined by the feelings of the patient. It should never give pain if possible. At first, it should not be left in above five minutes, nor even so long, if it give great pain in passing. Each time of application is to be lengthened gradually. The best time to let them remain in the passage, is when the patient has least to do, particularly in the morning when he is in bed. The bougie should be  
increased

increased in size, according to the facility with which the stricture dilates, and the ease with which the patient bears the dilatation.

When a stricture is to be cured by ulceration, the bougie should be introduced as far as possible, and the size of it increased as fast as the sensations of the patient can bear. To prevent the inconvenience of a bougie coming out, or the mischief of its passing into the bladder, it is necessary to tie a soft cotton thread round that end of the bougie which is out of the urethra, and then round the root of the glans. The projecting end of the bougie is to be bent down upon the penis.

In the removal of the strictures by the application of the caustic, Mr Hunter tells us, that in many cases he has succeeded beyond expectation. If the obstruction be any where between the membranous part of the urethra and the glands, while the canal is nearly straight, or can easily be made so by the introduction of a straight instrument, it becomes an easy matter to destroy them by caustic. Beyond that it becomes more difficult. But most of the strictures Mr Hunter has examined after death, appeared to be in the power of such treatment. The appli-



application of the caustic need not be longer than a minute, and it may be repeated every day, or every second day, allowing time for the slough to come off. For the application of caustic in these cases, Mr Hunter has invented an instrument, which consists of a canula with a plug at its extremity, capable of being withdrawn. After the canula is introduced, till it reach the stricture, and the plug withdrawn, a port-crayon with the caustic is introduced, and by this means it is made to act on the stricture alone.

From the repeated application of caustic in this manner, a bougie can soon be made to pass. And after this is accomplished, the case is to be treated as a common stricture.

There are few strictures which are not attended with spasms. But in some cases the spasm is more the disease than the stricture itself. In whatever part of the urethra the spasm be, if time will allow, it is proper to try internal medicines, and also external applications. The best internal remedies are opiates, and the turpentine, given either by the mouth or by the anus ; but especially opium in the form of clyster. Camphire, Mr Hunter thinks, may be  
useful



useful in stranguaries arising from spasm, as well as in those produced by cantharides. The Peruvian bark, which many have recommended, he thinks rather prejudicial. The external remedies are the steam of warm water with spirits, the warm bath, bladders of warm water applied to the perinæum, and similar applications. The crumb part of a new baked loaf warm from the oven, applied to the perinæum, has been found to give ease. And a cure has also been effected, by blisters applied either to the loins, or to the perinæum. But where the circumstances of the case require immediate relief, recourse must be had to the catheter or bougie. Where the contraction is near the bladder, the catheter will answer best; but in most cases the bougie will be sufficient, and is a much safer instrument.

In most cases, there is, Mr Hunter observes, an uneasy sensation at the end of the penis, which leads the patient to rub these parts; and sometimes during the friction the water will pass; while the same effect is sometimes also obtained, from gently irritating injections thrown in but a little way.

In opposition to retention of urine from  
spasm,

spasm, Mr Hunter next treats of the paralysis of the urethra. In this disease the bladder is hardly allowed to be filled, but the water dribbles away insensibly as fast as secreted. This disease is to be cured by stimulants, such as a blister to the loins, a blister to the perinæum, cantharides taken internally, electricity, or washing the parts with cold water.

Though caruncles and excrescences in the urethra have been considered as a common cause of obstruction to the passage of urine, yet Mr Hunter thinks they are very rare ; and in all his examinations of dead bodies, he has met only with two instances of this kind. He imagines they are to be considered as a species of internal wart. He thinks that this disease is not to be cured by the bougie; and he recommends the use of the caustic, if the parts are so situated as to admit the application of it.

Swelling of the prostate gland is of more serious consequence than perhaps any other cause of obstruction to the passage of urine, because we have few means of cure. It is, however, very rarely a disease with young men. The prostate gland, when swelled, generally becomes harder in its consistence. Thus while  
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the compression arising from its size prevents the urine from entering the urethra, its increased firmness hinders it from yielding ; and the symptoms arising from it are necessarily such as proceed from a stoppage of urine, producing an irritable bladder. For detecting this disease, the finger, after being properly oiled, must be introduced into the anus, with its fore part towards the pubis. If the parts be hard, making an eminence backwards into the rectum, so that the finger is obliged to be moved from side to side, to feel the whole extent of such a swelling ; and if it also appears to go beyond the reach of the finger, we may be certain that the gland is considerably swelled.

In this disease, for obtaining temporary relief, recourse is had to bougies, and to the catheter. The management of these requires great judgment on the part of the practitioner, to be regulated by the circumstances of the case. Often, by giving a particular bend to the bougie, sometimes in one direction, sometimes in another, it may be introduced with ease, when that cannot otherwise be affected. A catheter flexible at the point only, for about an inch, is, Mr Hunter thinks, the best.



While by these means temporary relief is obtained from the retention of urine, so to give temporary ease from pain, and to remove spasm, recourse must be had to opiate clysters. These it is often necessary to throw up even twice a day. With a view to the radical cure, Mr Hunter has seen hemlock and sea-bathing of service in several cases. He has heard of one case, in which the swelling was considerable, removed by the use of burnt sponge; and he suggests the trial of mezereon. He mentions also in a note, a case treated by Mr Earle, where, after a blister to the perinæum had been tried in vain, a seton was passed in the direction of the perinæum, having its orifices about two inches distant from each other. Upon this, the symptoms of irritability in the bladder began to abate, and in time went entirely off. Upon examination of the prostate gland, from time to time, it was found to decrease gradually, till it was nearly of the natural size. After the seton had been continued for some months, it was withdrawn. The symptoms soon again began to revive. It was afterwards introduced a second time, but without the former good effects. This, however, may still be an encouragement

agement to future trials. But, as Mr Hunter observes, a certain cure for this disease is not yet known.

From obstruction to the passage of urine diseases are induced in the bladder, particularly irritability and its consequences ; by which the bladder admits of little distension, becomes quick in its actions, and thick and strong in its coats. When the irritation of fulness comes on, the contraction of the bladder becomes more violent, in proportion to the resistance, whether permanent or temporary only ; the sympathetic contraction of the muscles of the abdomen takes place, and is also violent ; yet the urine can only be discharged in small quantity, so that the bladder is never entirely empty ; and what does pass, is no more than sufficient to take off the irritation of fullness. Thus the actions become frequent, and there is almost a constant oozing of urine from the penis between the times of making water. Sometimes the bladder is so irritable as never to cease acting ; but still strains, though there be nothing to throw out, even the action of the bladder becoming a cause of its own continuance.

In this case, the cure consists in removing the



over-action of the urethra, and the irritable disposition of the bladder. Opiate clysters are, Mr Hunter observes, the best means of temporary relief. He has also known good effects from a blister to the loins, or perinæum. But the radical cure must consist in the removal of the stricture, whether from a contraction of the urethra, a swelled prostate, or any other mechanical obstruction.

As obstruction to the passage of urine, in some cases, gives rise to increased action of the bladder, in others it produces a paralytic state of that organ. And when the bladder has its contractile power destroyed by distension, there is often a considerable extravasation of blood from its inner surface, so that the water when evacuated is extremely bloody. In such cases, after first attending to the abstraction of the water, stimulants and strengtheners are useful. Blisters to the loins, and to the perinæum, we are told, often succeed; and electricity is sometimes of singular service. But through the whole of the cure the water must be frequently drawn off, and the bladder should not be allowed to be distended.

In cases of total suppression of urine, when  
other



other means fail, an artificial opening must be made into the bladder for the evacuation of the urine. This opening may be made in the perinæum, where we now cut for the stone; above the pubis, where cutting for the stone was formerly practised; or within the rectum, where the bladder lies in contact with the intestines. Each of these methods, in certain circumstances, Mr Hunter thinks may have peculiar advantages; and he very candidly acknowledges, that he has not seen cases enough to enable him to give all the varieties that commonly happen, and of course to give all the advantages and disadvantages of each method.

Another disease of the bladder ranked among the supposed consequences of gonorrhœa, is where that viscus becomes extremely irritable, and will not allow of its usual distension. In this disease, though in some respects the symptoms are similar to those arising from suppression, yet the discharge of water is free. But after it is discharged, there is a considerable straining arising from the muscular coat of the bladder still continuing its contractions; and the disease often terminates fatally, from producing wasting and hectic fever.

Temporary relief is here procured by opium, particularly when applied near the part, as under the form of clyster. But Mr Hunter places more reliance on blisters applied to the perinæum, to the upper part of the back, or to the sacrum.

Among other supposed consequences of gonorrhœa, Mr Hunter treats of impotence. This he considers as either depending on the mind, or on a want of proper correspondence between the actions of the different organs. Thus there may be an erection of the penis, where neither the mind nor testicles are stimulated to action; and, on the other hand, the testicle may perform the action of secretion too readily for the penis. In both cases, he considers the soothing plan as being the best mode of cure, and looks upon opium as being in many instances a specific. But he observes, that washing the penis and scrotum with cold water, is often also of service; and to give it an additional degree of cold at some seasons of the year, he advises, that a proportion of common salt be added to the water, and the parts washed when the salt is almost dissolved.

He concludes his observations on gonorrhœa  
with



with some remarks on the decay of the testicle. The testicles, he thinks, are more subject to spontaneous disease than any other part of the body ; but what is most singular, is their wasting. Testicles have been known to waste in cases of rupture, or of hydrocele. But they will also waste wholly away without any previous disease ; or, when they have been, inflamed and augmented in size, after beginning to subside, as in the resolution of common inflammations, they will sometimes not stop at the former size, but continue to decay till they wholly disappear. He relates several cases of this kind. In all of these, however, the methods tried to prevent the gradual decay of the organ were of no effect. But if one testicle remained sound, it performed every function without any apparent defect.

In the fourth part of this work, Mr Hunter treats of the chancre. There are, he tells us, three ways in which chancres are produced : *1<sup>st</sup>*, By the poison being inserted into a wound : *2<sup>dly</sup>*, By its being applied to a non-secreting surface : And, *3<sup>dly</sup>*, By its being applied to a common sore. The poison, applied to any of these surfaces, produces its specific inflammation and ulceration,



ceration, attended with secretion of pus. The distance of time between the application of the poison and the occurrence of the disease is uncertain. But upon the whole, chancre is longer of appearing than the gonorrhœa. Mr Hunter has known instances where they appeared in twenty-four hours ; and others, where they appeared at the end of seven weeks.

Of chancre the most troublesome concomitants are phymosis, and paraphymosis. These being a thickening of the cellular membrane of the part, will commonly, he thinks, be in proportion to the degree of inflammation, and the distensibility of that membrane at the part.

In women, though subject to chancres, from the simplicity of the parts, these affections cannot take place. But the ulcerations are often more numerous in women, because the surface upon which they can form is larger.

This form of the disease, both in men and women, Mr Hunter considers as entirely local, the constitution having no connection with it, but sympathetically.

While gonorrhœa has evidently a tendency to a natural cure, Mr Hunter admits that this is never the case with chancre. For this he  
allows

allows it is difficult to account ; but he suggests, that it may perhaps arise from the inflammation spreading, and thus always attacking new grounds, and giving a succession of irritations.

Chancres admit of two modes of treatment ; the object of the one is to destroy or remove them by means of escharotics ; that of the other, to overcome the venereal irritation by means of the specific remedy of that poison. The first is the most simple method, but can be followed only on the appearance of the chancre when the surrounding parts are not yet contaminated. It may be done either by incision, or by caustic. But if the chancre appear upon the glans, caustic is preferable, because the hemorrhage from incision, is very often considerable. The common sensation of the glans is not very acute ; therefore caustic gives but little pain. The caustic to be used should be pointed at the end like a pencil, that it may only touch those parts which are really diseased. And this treatment, Mr Hunter tells us, should be continued till the surface of the fore looks red and healthy, after having thrown off the last sloughs. When it has arrived at this state, it will be found to heal like any other sore produced from a caustic.

When

When a cure is to be attempted, not by the destruction of the cancer itself, but of the venereal disposition and action; this may be done either by external applications, or by internal applications, thro' the circulation. Mercury, he observes, though it has no effect in gonorrhœa, will cure every chancre that is truly venereal. But as other dispositions also take place, so other assistance is necessary. The mercury is commonly applied under the form of ointment; but when mercury is united with watery substances in place of oil, by mixing with the matter, the application becomes more effectual. Mr Hunter has also experienced the best effects, from uniting mercury with conserve of roses, honey, mucilage, or the like, in place of unctuous matters.

When chancres take on an indolent disposition, recourse must be had to some warm balsam, combined with the mercury; or to some stimulant mercurial, as the red precipitate. When, on the other hand, they are extremely irritable, opium, or some of the preparations of lead, may with advantage be added to the mercury. The dressings require to be often shifted; three times a day is necessary in most cases.



cases. When, after the venereal taint is corrected, they become stationary, they may often be cured by touching them slightly with lunar caustic.

After some observations on the treatment of the Phymosis, and Paraphymosis, arising from chancres, he proceeds to treat of their cure, by mercury given internally.

In every case of chancre, let it be ever so slight, mercury should be given internally; and it should even be continued for some time after the chancres are healed. For as there are few chancres without the absorption of matter, it is the only means of preventing a constitutional affection. According to circumstances, it may be thrown in, either by the skin or stomach; and the quantity must, in general, be proportioned to the size, number, and duration of the chancres. Chancres in women require nearly the same treatment as in men. But as it is difficult to keep dressings on the parts, they should often be washed with mercurial solutions; and Mr Hunter thinks corrosive sublimate one of the best. To prevent preternatural adhesions, it is often necessary to keep some substance, such as a little lint, in the vagina, till the sores be skinned over.

After

After chancres have been healed, and the venereal taint completely removed; it sometimes happens that the prepuce still retains a considerable degree of tumefaction. In removing this, benefit is sometimes derived from the steam of warm water; from fomentations with hemlock; and also fumigations with cinabar. But if these are ineffectual, it may be proper to remove part of the overgrown prepuce; and the best way of removing it is by the knife.

Warts are another common consequence of chancres. The knife, or escharotics though not always necessary, act most quickly in removing them. A silk thread tied round the neck will often do very well. But in whatever way the wart is separated, it will in general be necessary to touch the base with caustic.

In the fifth part of this work Mr Hunter, treats of bubo. He applies this term to every abscess in the absorbing system, whether in the vessels or glands, arising in consequence of the absorption of venereal matter. He considers buboes as being exactly similar in their nature and effects to chancre, the only difference being in size. Inflammation of the vessels is not

so frequent as that of the glands. They in general appear like a chord leading along the back of the penis. This chord often inflames so much as to suppurate sometimes in more places than one; and thus a chain of these buboes, or little abscesses, takes place along the upper part of the penis through its whole length. Inflammation of the glands is much more frequent than that of the vessels, and happens from the venereal matter being carried on to these. The glands nearest the origin of the disease, as those in the groin, are in general the only ones that are attacked. In females, the seat of absorption from the parts of generation is more extensive than in men; hence the situation of the buboes is more varied.

For distinguishing the true venereal bubo from other similar swellings, he observes, that it is most commonly confined to one gland; it keeps nearly its specific distance, till suppuration has taken place, and then becomes more diffused; it is rapid in its progress from inflammation to suppuration and ulceration; the suppuration is commonly large for the size of the gland, and but one abscess; the pain is very acute; and the colour of the skin, where the inflammation attacks, is of a florid red.

When



When a bubo is ascertained to be venereal, resolution is always to be attempted, if it be in a state of inflammation only. This resolution depends principally upon mercury, and almost absolutely on the quantity that can be made to pass through them. Hence it is to be applied to those surfaces from whence lymphatics going into the bubo arise. Mercury, however, can only cure the specific disposition of the inflammation, and the disease is often attended with other kinds. Sometimes the common inflammation is carried to a great height; at other times the inflammation is erysipelatous, or scrophulous. In the first case, bleeding, purging, and fomenting, are recommended; in the second, the Peruvian bark is the best medicine; and, in the third, hemlock, and poultices made with sea water, may be of service. Vomits have sometimes been useful in resolving buboes, even after matter has been formed in them. Mr Hunter relates a very remarkable instance of this, which happened to an officer, with whom vomiting was excited by sea-sickness.

In some instances, notwithstanding every attempt to resolution, buboes will suppurate.  
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This is to be forwarded by the same means as in other cases. It has been a dispute, whether mercury should be continued or not during the suppuration. Mr Hunter is of opinion, that many advantages arise from continuing it, in a small quantity. Before a bubo is opened, it should be allowed to go on, thinning the parts as much as possible. It has been disputed, whether an opening is to be made by incision or caustic. In this, Mr Hunter thinks the surgeon should, in some degree, be guided by the patient. If it be wholly left to the surgeon, and if the bubo be small, he recommends a slit with a lancet; but when there is a large quantity of loose skin, he thinks the caustic will in general answer better. The bubo is to be dressed afterwards, according to the nature of the disease, and the constitution is to be attacked with mercury, either by applying it internally or externally. The giving it internally assists the external applications to cure the buboes, and prevents the effects of the constant absorption of the venereal matter from the fore.

It sometimes happens, that the sores from buboes, after being entirely deprived of their venereal disposition, form into a sore of another



ther kind. In these cases, Mr Hunter is apt to suspect that there is often something scrophulous in them. He has often seen them give way to hemlock, especially when joined to the Peruvian bark. The hemlock answers best when it is applied both internally and externally. He has also seen benefit from sarsaparilla, from sea-bathing, and from the sea-water poultice. Mezereon is in some instances of singular use; and he has seen good effects from the juice of oranges being taken in large quantities, which has been particularly recommended by Dr Fordyce.

The subject of the sixth part of Mr Hunter's treatise is the Lues Venerea. When the blood is contaminated with venereal virus, the effects upon the constitution, according to Mr Hunter, are all of one species, that is, ulcers; and these local effects upon the constitution are, in general, slow in their progress, attended with little inflammation, and seldom or never painful, excepting in particular parts. He contends, that neither the semen, saliva, breath, sweet milk, or any other secretion, is affected with this poison; and he brings even very strong instances to shew, that the venereal virus may  
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be taken into the stomach, and digested without producing any inconvenience. He argues, that even the blood of a pocky person has no power of contaminating, and is incapable of giving the disease to another by inoculation.

He next endeavours to shew, that the matter separated by those sores, which arise from contaminated blood, is very different from the matter of chancres and of buboes. He relates several experiments which he performed, and which he thinks prove that this matter is not contagious. But we must acknowledge, that to us these experiments neither seem to be conclusive, nor does the case of which he gives a detail overturn the generally-received opinion, that nurses are frequently infected with syphilis from ulcers in the mouths of infants; which can only have been secondary, arising from blood contaminated, in consequence of the disease first appearing at other parts. And we cannot help regretting, that the experiments he instituted were entirely with the matter from chancres and buboes, none of it with that from gonorrhœa. We must however observe, that on this subject his reasoning is highly ingenious; and we consider it as well

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deserving the future attention of practitioners. It is by future and accurate observation alone, that the conjecture he has thrown out, which is unquestionably of considerable importance in practice, can either be confirmed or refuted.

After making many observations on the local effects from the constitution on the symptomatic fever, on the local and constitutional forms of the disease never interfering with each other, on the supposed termination of lues in other diseases, on the specific distance of the venereal inflammation on the parts most susceptible of Lues, and on the time and manner in which these parts are affected, Mr Hunter gives a general summary of his doctrine in the following conclusions: *1<sup>st</sup>*, Most of the parts which are affected in lues venerea receive the venereal irritation at the same time: *2<sup>dly</sup>*, The parts exposed to cold are the first that take on the venereal action; then the deeper-seated parts, according to their susceptibility for such an action: *3<sup>dly</sup>*, The venereal disposition, when once formed in a part, must necessarily go on to form the venereal action: *4<sup>thly</sup>*, All parts of the body under such disposition do not run into action equally fast; some requiring six or eight weeks, others as many months: *5<sup>thly</sup>*,



5thly, In the parts which come first into action, the disease goes on increasing, without wearing itself out ; while those that are second in time, follow the same course : 6thly, Mercury hinders a disposition from forming, or, in other words, prevents contamination : 7thly, Mercury does not destroy a disposition already formed : 8thly, Mercury hinders the action from taking place, although the disposition be formed : And, *Lastly*, Mercury cures the action. On these principles, he thinks that many facts respecting the cure are easily explained.

Mr Hunter next proceeds to give a detail of the symptoms of Lues Venerea. After enumerating those of the first stage, particularly the affections of the skin, the throat, the mouth, and tongue ; he relates an experiment made to ascertain the progress and effects of the venereal poison ; and which, in his opinion proves the following points, or at least renders them probable : 1st, That matter from a gonorrhœa will produce chancres : 2dly, That the glans does not take on the venereal irritation so quickly as the prepuce : 3dly, That Mercury, applied to the legs and thighs, is the best method of resolving a bubo : 4thly, That buboes



may be resolved in this way, altho' the constitution be at the same time infected : *5thly*, That parts may be contaminated, and not having taken on the action, may have the poison kept dormant in them, while under a course of mercury for other symptoms, but break out afterwards : And, *Lastly*, That the poison having originally contaminated only certain parts, when not completely cured, can break out again only in these parts.

We shall not here enter into any particular detail of these doubts which, in our opinion, may be raised with respect to this experiment. We shall only observe, that before the cautious reader adopts all the conclusions which are drawn from it, he would require a satisfactory account of many particulars of which no mention is made in the relation given in Mr Hunter's treatise. And indeed, as an objection to the experiment from its very commencement, it may be asked, Why nearly the same series of appearances, as are there described, does not take place in every instance of gonorrhœa, where either no mercury is taken, or where it is employed only in small quantity ? There is certainly no instance of any person labouring under gonorrhœa, to  
whose

whose glans and prepuce contagious matter is not copiously applied. And there are very few, if any instances, in which better opportunities for absorption are not afforded, than can arise from a small puncture with the point of a lancet. Hence then it is evident, that the matter of gonorrhœa is seldom, if ever, capable of producing in other cases such consequences as are related in the experiment now under our consideration.

Mr Hunter next proceeds to enumerate the symptoms of the second stage of Lues Venerea. These are chiefly affections of the periostium, tendons, fasciæ, and ligaments. The progress is here still more gradual than in the first stage; and as the swellings increase by slow degrees, they show but little signs of inflammation. When the bones become affected, the pain is sometimes very considerable, at others hardly perceptible; and they are in general periodical, being most severe in the night.

The general effects of the venereal poison on the constitution, are similar to other irritations; it produces fever of the slow kind, and what is called a hectic disposition. These complaints, however, are not always to be found;

the poison, in some cases, stimulating so slowly, as hardly to affect the constitution, unless it be allowed to remain in it a long time.

To cure the local and visible effects of lues venerea, we must, Mr Hunter observes, attack it through the medium by which it was communicated, that is the blood, without, however, considering the blood itself as the diseased part, or containing the poison, but as the vehicle of our medicine, which will be carried by it to every part of the body where the poison was carried, and in its course will act upon the diseased solids. Mercury is the great specific, and hardly any thing else is to be depended on. Mercury, when introduced, acts on all parts of the animal machine. It cures those that are diseased, and affects but little those that are sound. It may be carried into the constitution, either externally or internally. Sometimes, however, in the one way, no effect will be produced, either on the disease or in the constitution. It is then necessary to try the other mode; and sometimes advantage arises from varying the preparations, one being introduced when another cannot. In this way, the practitioner will very generally succeed, at least



least Mr Hunter tells us, he has never met with a case where an absorption of mercury could not be accomplished, either by internal or external application.

In giving mercury in the venereal disease, the first attention should be to its quantity, and to the visible effects in a given time. These, when brought to a proper pitch, are only to be kept up, and the decline of the disease to be watched ; for by this we judge of the invisible or specific effects of the medicine.

The quantity of mercury to be thrown in must be proportioned to the violence of the disease. Here, however, regard must be paid to the time in which a given quantity is to be thrown in, and to the effects it has on some parts of the body ; as the salivary glands, skin, or intestines. If it be given in very small quantities, and increased gradually, so as to steal insensibly on the constitution, its visible effects are less ; and it is hardly conceivable how much may at last be thrown in, without having any visible effect at all. Its sensible effects are generally an increase of some of the secretions, a swelling in the salivary glands, and an increase of saliva. It sometimes also gives rise to purging,

ging, sweating, and diuresis ; sometimes one secretion only is affected, sometimes more, sometimes altogether. But the effects on the mouth are the most frequent.

As mercury generally produces evacuations, it was once imagined that it was by this means it effected the cure of the venereal disease. But experience, Mr Hunter observes, has taught us, that these are of no service ; and that, on the contrary, evacuations produced by this medicine retard the cure. They are, however, in some degree, a gage of its constitutional effects ; and we have, he observes, no good proof of its affecting the constitution, but by its producing an increase of some of the secretions. He is of opinion, that the action of mercury, in overcoming the disease, depends on its destroying the diseased action of the living parts, counteracting the venereal irritation by producing another of a different kind.

An almost infinite diversity of modes have been proposed for introducing mercury into the system. Mr Hunter gives the preference to external application, under the form of ointment. It is often, however, much more convenient to give it internally. But, in this  
way,

way, it often produces disagreeable effects on the stomach and intestines, as sickness, griping, and purging. For counteracting its effects on the stomach, he recommends essential oils, as that of cloves ; and for preventing its action on the intestines, he advises that opium should be added.

He observes, that the corrosive sublimate often removes visible local effects very suddenly, but without destroying the venereal action. Hence, he thinks, that it is not to be depended upon for a radical cure. And indeed he recommends, that in every case, after the local symptoms are removed, the mercurial course should be continued for a fortnight or three weeks, particularly if the symptoms have disappeared suddenly. In the advanced stages of the disease, the greatest quantity of the medicine that the patient can bear is to be thrown in, and continued with steadiness, till there be reason to conclude that the disease is destroyed.

Mr Hunter is of opinion, that during a mercurial course little alteration is in general necessary in diet. And he does not see why mercury should not cure the disease, under any mode whatever of regimen or diet. But as a severe  
mercurial



mercurial course is very weakening, and as from the state of the mouth the patient is often prevented from taking many kinds of food, recourse must be had to fluids of the most nutritious kind, as milk, eggs, and the like. He thinks sugar one of the best restoratives of any kind. And he advises, that sugar, or honey, which he thinks is perhaps of a still more nutritive quality, should be employed for sweetening every thing that is either to be eat or drunk in these cases.

In general, mercury introduced into the system removes the local complaints that take place in lues venerea. In these cases, the cure may sometimes be assisted by the local application of mercury to the part, particularly in the form of ointment. And Mr Hunter tells us, that he has seen a venereal node, which gave excruciating pain, cured by an incision being made to the bone the whole length of the node; after which the pain has ceased, the swelling diminished, and the sore healed up mildly. Blisters, he observes, have also been applied with success to nodes, removing the pain and diminishing the swellings.

When an abscess forms in a node on the periosteum,

riosteum, the bones are generally affected, and make part of the abscess. In such cases, opening with great freedom is absolutely necessary; for the violence, in Mr Hunter's opinion, assists in destroying the venereal disposition. He, however, tells us, that no skin covering a bone should be removed from an abscess, especially in the lower extremities. Exfoliation, if here taking place, is to be healed as in other cases.

In particular cases, effects take place from mercury which require to be corrected. When mercury falls upon the mouth, Mr Hunter never saw any benefit from purging; but he thinks he has seen good effects from sulphur, and from employing as a gargle the tinctura thebaica diffused in water; a dram of the former being added to an ounce of the latter. When it falls upon the skin, he considers the bark as the best corrector. This may also be of use when it falls upon the kidney; but in that case it may in general be allowed to go on. When it falls upon the intestines, mercury will seldom fail of removing all the symptoms. Mr Hunter is of opinion, that under whatever form mercurial medicines be exhibited, all of them act ultimately from mercury being in a state of solution  
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in the fluids ; and he thinks it much more probable, that in this way, it acts by producing an irritation in the constitution, than on any other principle. In illustration of this opinion, he relates the case of a gentleman to whom electricity had been recommended for some complaint, and tried without any effect. But this gentleman was afterwards put upon a mercurial course, from which the irritability of his system was so far increased that he was unable to bear shocks of half the former strength. It had then, however, the effect of removing the complaint against which it was at first employed ; a circumstance which suggests the propriety of combining these modes of cure on some occasions.

Although Mr Hunter considers mercury as the only medicine to be depended on, in the cure of lues venerea, yet as gum guaiacum, and sarsaparilla root, have both been recommended, he took opportunities of trying their comparative powers. He is of opinion that guaiac has considerable specific power in this disease, but the sarsaparilla appeared to him to have no effect.

In treating of the effects remaining after the  
lues



lues venerea is cured, and of the diseases sometimes produced by the cure, Mr Hunter, after mentioning the advantages which have sometimes been obtained in these cases, from the decoction of the woods, the Lisbon diet drink, mezereon and hemlock, makes some remarks on the use of opium. This, he observes, has of late been supposed to cure lues venerea. He relates some cases treated by this medicine, which have convinced him that it is inadequate to the cure of syphilis, and which serve to shew, that in some cases it is capable of producing very violent effects in the constitution. It has, however, he tells us, been long a favourite medicine with him ; not only as relieving pain, but as altering diseased actions, and producing healthy ones ; and in this manner he explains the benefit derived from it, in some of those affections remaining after lues venerea has been overcome, and in all sores attended with irritability. In these, he observes, that a decoction of poppy-heads made into a poultice is an excellent application.

This part is concluded with some observations on the prevention of the venereal disease. Preventives may, he thinks, be divided into various kinds ;

kinds ; as those which will not allow the venereal matter to come in contact with the parts ; those which wash it off before it stimulates ; and those which act chemically, destroying the poison. This leads him to mention oils, caustic, alkali, lime-water, Goulard's extract of lead, and corrosive sublimate dissolved in water, as having sometimes been employed with the desired effect.

In the seventh and last part of this work, our author makes some remarks on the diseases resembling lues venerea which have been mistaken for it. Here he endeavours to show, that most of the symptoms of the venereal disease, in all its forms, are common to other diseases. Hence, to determine what the disease is, we must attend to the original cause of the complaint, to a number of leading circumstances as dates, to its effects upon others from connection when only local, joined with the present appearances and symptoms. But even with all this knowledge, he observes that we are often mistaken. To prove this, he relates several doubtful cases which he thinks may put it in the power of others to judge for themselves, in future instances of a similar nature. And he concludes with  
some



some observations on diseases supposed to be venereal, produced by transplanting teeth.

After offering some remarks on different cases of this kind which have fallen under his observation, particularly on that related by Dr Watson in the Medical Transactions of London, he thus sums up the argument in favour of the disease not being venereal. 1. Two patients, whose cases were similar to the others in their origin, recovered without medicine. 2. They who seemed to be cured by mercury, had not a treatment exactly similar to those who were indisputably poxed. 3. It is impossible for parts to have the power of contaminating, which have not themselves assumed the diseased action. 4. The parts here supposed to contaminate, were never known to have been contaminated themselves.

But although Mr Hunter thus contends against the disease being venereal, yet he admits, that in consequence of this operation a disease most certainly has taken place, cured even with more difficulty than the lues venerea is in common. And he supposes it to arise from the peculiar irritation, occasioned even by a sound tooth. Drawing the tooth early has, he tells



us, been successful in one case; and he considers it as the only mode of preservation yet known.

To this work are annexed several very elegant and accurate engravings, illustrating different diseased states described in the course of the work. For these, however, we must refer the reader entirely to the work itself. And we may conclude with observing, that though our analysis has extended to an uncommon length, and has, we hope, given a tolerably distinct view of those practices which may be considered as new ones; yet it is only from a careful perusal of the original, that the medical reader can expect to obtain a proper knowledge of those peculiar and ingenious opinions which Mr Hunter endeavours to establish.

## IV.

*Medical reports of the effects of Arsenic in the cure of agues, remitting fevers, and periodic headaches. By Thomas Fowler, M. D. Physician to the General Infirmary at Stafford.*  
8vo. London.

**T**HOUGH arsenic has long been reputed one of the most violent poisons hitherto known, yet it has long been, in some degree, in use in the practice of medicine; and, for more than a century past, it has particularly been recommended by some, as a most efficacious remedy in the cure of intermittent fevers. But it does not seem to have been from the authority of Wepfer, Friccius, Newman, or other writers of that period, that Dr Fowler was first led to the use of it.

Not many years ago, a remedy began to acquire considerable reputation in the different parts of the country, particularly in those parts where intermittents were most frequent, under

the name of the Tasteless, or Patent Ague Drops. These were occasionally adopted in the hospital practice at Stafford, in the years 1781, 82, and 83. And in the beginning of October 1783, Mr Hughes, to whom Dr Fowler pays a high compliment, for industry, attention, and abilities, in the line of his profession, informed our author, that he had tried to imitate these ague drops, and that from a number of experiments he was convinced they were a preparation of arsenic.

This information directed the attention of Dr Fowler to the use of arsenic in intermittents. Following a hint given by Dr Lewis, he thought of preparing a watery solution of it, by means of the fixed vegetable alkali. And after trials of such a solution, with different degrees of strength, he adopted the following formula :

R. Arsenici albi in pulverem subtilissimum triti.

Salis Alkalini fixi vegetabilis purificati singulorum grana sexaginta quatuor.

Aquæ fontanæ distillatæ libram dimidiam.

Immitantur in ampullam florentinam qua in balneo arenæ posita, aqua lente ebulliat donec arsenicum perfecte solutum fuerit, deinde solutioni frigidæ adde.

Spiritus



Spiritus Lavendulæ compositi unciam dimidiam. Aquæ fontanæ distillatæ libram dimidiam, plus vel minus, adeo ut solutionis mensura libra una accurata sit, vel potius pondere unciaë quindecim cum dimidiâ.

This formula our author employed in a very great variety of different cases, several of which are detailed at full length ; but in others, to avoid prolixity, he has thought it sufficient to mention merely the general result. And as the name of arsenic is strongly connected with the idea of a poison, he prescribed it under the general title of the Mineral Solution. When any particular dose of this was directed thrice a day, as was done to many of his patients, it was given at six o'clock in the morning, two in the afternoon, and ten in the evening : and when it was directed twice a day, the hours of exhibition were ten in the morning, and ten in the evening. To adults, unless when some particular directions were given, it was exhibited in a tea-cup-full of water, to children it was given in the same vehicle, but in less quantity.

Having premised these circumstances, with respect to the method in which Dr Fowler employed arsenic, we shall next give some account

of the cases in which he used it, and of the success which attended his practice.

The first case we shall here deliver at full length, in the words of the author.

Catharine Homes of Tainworth, aged 17, admitted an in-patient January 31. 1784, has had a quotidian ague for four days past. Appetite impaired. Ordered to take eight drops of the mineral solution three times a-day, for three days.

January 26th. The solution caused no disturbance in the system, and she has missed her fit this morning. Appetite very bad. Ordered sixteen drops of the solution this evening, and then to resume the former doses three times a-day, for two days.

January 28th. Sixteen drops did not prove emetic, but caused a loose stool, with some griping. The subsequent doses of eight drops each gave no disturbance, and she continues free from her ague. Appetite still very indifferent. Ordered half an ounce of a spiritous tincture of rhubarb at bed-time.

January 31st. The tincture operated gently with relief to her stomach. No return of fits.

February 7th. No relapse.

From

From this case Dr Fowler remarks, that although the doses were small, yet the cure was speedy and successful. The dose of sixteen drops was given with the view of exciting vomiting, in order to restore her appetite by cleansing the stomach, but it operated rather downwards.

In the next case which is related, the patient was ordered ten drops twice a-day ; but in place of this, he took by mistake fifty drops within the space of nine hours. It operated for the space of ten hours afterwards as a violent emetic, attended with griping and purging. But soon after this, all its effects ceased, and she had afterwards no return of her intermittent.

In the third case, that of a young man, twenty drops were taken three times a-day. It proved emetic, and cathartic, but with no great degree of severity. The cure was speedy and permanent. The fourth patient, a child, took eight drops twice a-day. The operation was not violent, and the event successful.

The fifth patient had been subjected to an intermittent for five months. During most of that period, it had observed the quartan type, and



it had originated in a fenny country ; yet it was entirely removed in eight days by the use of the solution to the extent of ten drops three times a-day. In the sixth case, twenty-six drops of the solution taken twice a-day in general excited vomiting. It was cured in five days, although of ten weeks continuance, before the use of the solution.

In these cases our readers have striking examples of the efficacy of this medicine, so that we reckon it unnecessary, to take notice of the others mentioned in this section which in all amount to fifty-two. It is sufficient to remark, that most of them afford unequivocal evidence of its success, and that it was equally effectual with both sexes at all ages.

In the second section of this work, Dr Fowler presents us with twelve cases, in which the mineral solution failed when given by itself. The patients were afterwards cured by the Peruvian bark. But there seems to be good reason for believing, that with many of them at least, the solution had considerable influence in aiding their recovery. In some of these the solution was irregularly taken ; in others, from peculiar idiosyncrasy, its use could not be persisted

sisted in. But in all of them it had evidently a very considerable effect upon the disease. And in some, after the Peruvian bark, as well as the solution, had failed, when taken by itself, the disease was speedily and radically cured by the combined use of both medicines at the same time.

The success which attended Dr Fowler's practice with the mineral solution, in cases of intermittent fever, led him also to employ it in some cases of remitting fevers, and of periodical headaches. And accordingly, in the fourth section of his treatise, we are presented with nine cases of patients to whom it was exhibited, when labouring under the former disease. In some of these, the remission observed a quotidian, in others a tertian type. In most of them the solution, taken to the extent of ten or twelve drops twice or thrice a-day, was soon productive of a cure. But in one, its operative effects were so troublesome, that it appeared most prudent to complete the cure by other medicines. In another, where it was exhibited only for three days, it produced no relief. Besides the cases here particularly alluded to, Dr Fowler has employed this remedy also in some

others. And he concludes the present section with remarking, that of sixteen cases of remitting fever, in which he has employed it, ten were cured by means of it. Four had the disease suspended, and two only employed it without relief.

In the fifth section, Dr Fowler presents his readers with seven cases of periodical headaches in which he employed it. Six of these were radically cured by means of it, when taken from twelve to twenty drops twice or thrice a day. And in the seventh case, the medicine had obviously a good effect, altho' taken only for three days; so that Dr Fowler thinks it probable this case also would have been successfully terminated, had she continued the use of it.

After giving, in the sixth section, the formula for the preparation of the mineral solution, which we have already transcribed; and likewise formulæ for a Pulvis Emeticus Antimonialis, Mistura Cathartica, Electarium Aperiens, Pilulæ Chalybeatæ, and Mistura Peruviana, which in particular cases were used in conjunction with it, Dr Fowler proceeds, in the seventh section, to make some observations on the doses and mode of administering the mineral solution in agues.

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He has used it, he tells us, with adults, from ten drops twice a-day, to twenty drops thrice a-day, and has cured agues by both extremes, as well as by all the intermediate doses. The latter, however, he found to be more efficacious than the former. But this superior success was counterbalanced, by their operative effects being troublesome and distressing. Hence he gives the preference to intermediate doses ; which will, at the same time, in general, be found to be sufficiently successful ; and he proposes the following doses, which he thinks maybe most advantageously employed. Patients from two to four years of age, may take from 2 to 4 drops ; from five to seven years, may take from 5 to 7 drops ; from eight to twelve years may take from 7 to 10 drops ; from thirteen to eighteen, may take from 10 to 12 drops ; and from eighteen and upwards, may take 12 drops as a dose. He directs, that these doses be given at stated hours, whether they coincide with the paroxysm or not. And he advises, that doses proportioned to the age of the patient should be administered three times a-day for five days. At the end of that time, the fits being suspended, let the use of the medicine  
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be omitted for two or three days, and then repeated for three days, to prevent a relapse.

This he considers as the most general direction relative to the use of the solution in the cure of intermittents. But he observes, that it admits of a considerable number of exceptions and qualifications in the course of practice. If, after a successful administration of the solution, a relapse of the disease be occasioned, by catching cold, casual intemperance, extraordinary fatigue, or any other accidental cause; the same course of medicine ought to be speedily repeated, without variation. But if no suspension of the disease takes place, from the uninterrupted use of the medicine for eight days; if a relapse has occurred, without any obvious cause, within a short time after a regular course of the medicine; or if the operative effects of the solution prove very troublesome, he advises, that the cure should be attempted by a regular course of the Peruvian bark. If the solution and Peruvian bark have been separately administered, and have failed, it will sometimes, he thinks, be adviseable to try the joint power of the medicines at the same time, but in doses rather smaller than usual.

In

In these cases, the solution is to be taken at stated hours three times a-day, and the Peruvian bark may either be given combined with it at the same periods, or between the fits, in as frequent doses as the stomach can bear.

When the operative effects from the solution are very troublesome, it is necessary that the dose should be lessened. But if they be supportable, they may be much diminished, by the addition of a few drops of liquid laudanum; and thus the course of the solution may be successfully continued without diminishing the doses.

If at any time, during the course of the treatment, the stomach appears to be loaded from indigestion, or the body happen to be very costive; a gentle emetic, or laxative, may, he tells us, be administered with advantage. The diet should be plain and mild, care being taken to avoid much mixture of food, or loading the stomach.

Though Dr Fowler has employed the solution with success, both in cases of pregnancy and early infancy; yet, when its operative effects are troublesome, he thinks that with these patients it ought not to be persisted in.

In



In the treatment of remitting fevers and periodic headaches, the same rules and cautions are to be observed as in intermittents.

In the eight section, Dr Fowler offers some observations on the operative effects of the mineral solution. After accurately describing what he has observed to occur on different occasions, particularly nausea, gripes, vomiting, purging, swellings on different parts of the body, especially the face, diuresis, a diminution of the urinary discharge, uneasiness at the pit of the stomach, slight eruptions resembling nettle-rash, sweating, headach, and slight tremors, which, however, he tells us, are very rare occurrences ; he proceeds to take notice of the means of obviating these, when necessary.

A nausea, he observes, of half an hour, a stool extraordinary in a day, or very slight griping pains in the bowels, are such gentle effects, as seldom to require the administration of the medicine to be interrupted. The vomiting also, although severe in general, goes off when the medicine is interrupted. When the purging becomes troublesome, opiates in small doses, two or three times a-day, will generally give effectual relief to the bowels.

When

When the griping is very severe, to the use of opiates, gentle laxatives must be premised.

The swellings which sometimes attend the use of the solution, are rather, he observes, of the elastic kind. They most frequently appear on the face, particularly affecting the eye lids, and are worst in the morning. When they do occur, which is but seldom, it is generally within a few days after commencing the use of the medicine. They do not seem to have any dangerous tendency; and, in general, subside on the use of the medicine being given up. When they occasion a troublesome sensation, their removal, Dr Fowler observes, seems to be accelerated by gentle emetics and cathartics. Though the anorexia be even considerable, the appetite is in general soon recovered, on omitting the use of the solution. But when this does not happen, relief is speedily obtained by gentle evacuants, especially emetics. The other effects have been very rare; and, in these, Dr Fowler has seldom found it necessary to do more than suspend the use of the solution. And even this was not done in all cases.

After some observations on the curative effects of the solution, in the ninth section; in  
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which we are presented with a tabular view of the intermittents he has treated by means of it, and from which it appears, that of two hundred and forty-seven cases of intermittents, in which he has given it, one hundred and seventy-one were cured, fifty-one suspended, twenty relieved, and five only employed it without relief, Dr Fowler proceeds, in the tenth section, to draw some practical conclusions from his experience. And from what he has seen, he thinks that the following general observations may justly be deduced :

1. That the mineral solution is an efficacious and valuable remedy in the cure of agues.

2. That in proportion to the number of cases in which it has been tried, it appears to be equally successful in remitting fevers and periodic headaches.

3. That being tasteless, it may often be conveniently exhibited to children, and certain adults ; who cannot be prevailed upon to take the Peruvian bark, from its bitterness, or other medicinal qualities.

4. That from its general efficacy, it is highly probable it will prove successful in most cases, wherein



wherein the Peruvian bark shall fail in producing its usual effects.

5. That although its curative virtues will be obvious, in almost every case of ague, the paroxysms, in a number of instances, will not be relieved or suspended for a certain time.

6. That a very frequent cause of the failure of the medicine, is owing to its operative effects proving troublesome, and thereby not permitting a regular course of its administration.

7. That the operation of the medicine on the bowels, which is often a cause of failure, may frequently be obviated, and its administration successfully continued, by the assistance of small doses of liquid laudanum.

In concluding this subject, Dr Fowler remarks, that from the variety of diseases, in which he has tried the mineral solution, there is good reason to believe that its efficacy will not be confined to periodical distempers. As, however, he has not had sufficient experience for establishing any general facts, he is entirely silent with regard to its effects in these cases. We however hope and trust, that he will continue

tinue his valuable researches for enriching medicine, by useful facts founded on cautious trial and accurate observation ; and that, at some future period, the public shall be favoured with the fruits of his farther observations, continued with his usual industry and discernment.

To this treatise are subjoined two letters addressed to Dr Fowler ; the one from Dr Arnold, physician to the infirmary and dispensary at Leicester ; the other from Dr Withering, physician to the hospital at Birmingham ; from both which, additional confirmation is afforded of the efficacy of arsenic in the cure of intermittents. They employed it, indeed, in a form somewhat different, that, viz. of a simple watery solution, without any alkaline salt, and in a larger proportion of water. The medicine is probably, from this circumstance, less steady, and less readily diffusible in a farther quantity of menstruum, than when in a saline state. Still, however, they serve to confirm the power of this active mineral in cases of intermittents. Dr Arnold tells us, that he began by trying it in a very bad and obstinate case, which had resisted the power of the Carribbean and red bark ; and that this at length completely yielded

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ed to the arsenical solution. He then began to give full scope to this medicine, and prescribed it in almost every case which offered. And at the time when his letter was dated, he had tried it in about eighty cases of intermittents, quotidianas, tertians, and quartans ; and he had seldom known it fail of success. In a few instances he had seen reason for laying it aside, and trusting the cure to the red bark, which had succeeded. But he found the solution succeed in as many instances where the red bark failed. And in no case was he sensible that it ever produced any permanent ill effect, or any other transient inconvenience, than nausea, vomiting, griping, and purging. These, by care in the exhibition of the medicine, were always prevented from becoming troublesome, or in the smallest degree alarming.

He is of opinion, that the Peruvian bark and arsenical solution cure intermittents with equal certainty and safety ; nor has he been able to determine which cures with greatest celerity. And even allowing that the arsenical preparation was not so expeditious as the Peruvian bark, yet, in consequence of its being insipid,



it will often be found an useful substitute, when a load of bark could not be borne.

From Dr Withering's letter, it appears that he began the use of the arsenical solution nearly about the same time with Dr Fowler; and principally also, in consequence of the analysis of the tasteless ague and fever drops, made by Mr Hughes of Stafford. In autumn 1783, Dr Withering employed the arsenical solution with forty-eight patients, labouring under intermittents. Of these, thirty-three were cured by the use of the solution alone; three complained of pain in the stomach, loss of appetite, and had swollen faces; but their fevers were cured, and a little soluble Tartar removed these symptoms. The other twelve patients received no benefit. In autumn 1784, it was, he tells us, almost constantly prescribed, and with him has ever since maintained its credit, under a very great number of trials.

With other practitioners at Birmingham, it has been employed no less successfully. For Dr Withering tells us, he was informed by Mr J. Freer, junior, an eminent surgeon there, and who was one of the first to turn his attention to this medicine, that he had given it to  
more

more than a thousand patients, without either hazard or inconvenience.

Thus then it appears, that we have the concurring testimonies of several eminent, impartial, and disinterested practitioners, in favour of this mineral, as a safe, active, and efficacious medicine. On such authority, notwithstanding the terror which has been entertained for the name of arsenic, it may surely be considered as entitled to a fair and candid trial from others.

## V.

*Dissertations relative to the Natural History of Animals and Vegetables. Translated from the Italian of the Abbé Spallanzani, Royal Professor of Natural History in the University of Pavia, Superintendant of the Public Museum, and Fellow of various learned Societies. vol. II. 8vo. London.*

IN the 10th volume of our first decade, the reader was presented with a pretty full analysis of the ingenious experiments made by Mr Spallanzani on the subject of Digestion,

which have thrown so much light on that important function. In the volume now before us, he prosecutes, with similar success, his inquiries on a subject still more intricate, that, viz. of Generation.

In his first dissertation concerning the generation of animals, he begins, by treating of the generation of the green frog, or that commonly met with in waters, particularly in puddles and ditches.

This animal, in general, begins its amours in April, and ends them in May. And during their continuance. the males maintain a constant croaking. In autumn and winter, the immature eggs all lie in the ovarium, which is divided into two lobes. These lobes consist of lesser ones, each of which is invested with a peculiar membrane. The eggs are of two sizes; some very small, so as scarce to be visible by the naked eye, others seven or eight times larger. Both kinds are globular. The small ones are of a livid grey colour; of the large, one hemisphere is white, and the other black. The slightest touch is sufficient to burst them, after which they are dissolved into a cineritious viscid fluid.

If



If these eggs be examined in spring, they are still found in the ovarium, but considerably enlarged; and they are found to be mature, when the male is coupled with the female. In the copulation of this species, the male, climbs upon the back of the female, and passing his fore-legs under her axillæ, brings them to meet upon the breast; and there clasping his fingers, holds her close till she has discharged her eggs. When the heat of the atmosphere is considerable, the female will be free in five or six days. But in a cold season, he has observed that the embraces of the male continue for eight or nine days. From more than an hundred and fifty trials, Mr Spallanzani has found, that eggs taken from the ovarium, the oviductus, and even the uterus, when the male is embracing the female, are not prolific. The discharge of eggs lasts for an hour; and, during this process, he has killed a female, and put the eggs which remained in her body into the same water into which these discharged by the animal fell. But while the latter produced tadpoles, the former became an offensive putrid mass. From these facts, he concludes

that the fecundation of eggs does not take place within, but without the body of the female.

Of this he had even farther opportunity of being satisfied. He had not only observed, that during the discharge of eggs the agitation and croaking, both of the male and female, were very remarkable ; but also, that an obtuse, tumid point, which he suspected to be the penis, was elongated, and now and then brought towards the eggs nearest the vent. But while the animal remained in water, its natural situation for copulation, he could not perceive any emission from this supposed penis. He therefore placed some couples, of which the female was beginning to discharge her eggs, in empty vessels. He then saw, that there spirted a small jet of limpid liquor, from the tumid point in the vicinity of the anus, upon the eggs hanging out at the vent of the female. This phænomenon took place only at intervals ; the female from time to time discontinuing the discharge of eggs, and the male the emission of semen. As these eggs, when afterwards put into water, brought forth young, he had no hesitation in concluding that the liquor emitted by the male was real semen.

In imitation of the Abbé Nollet, our author put breeches of waxed taffety on the male frog. This encumbrance did not prevent him from seeking the female with equal eagerness. But the eggs of the female were never in these cases prolific. He discovered the semen, however, in the breeches, in the form of drops, and by means of this obtained artificial fœcundation.

After these observations on the impregnation of frogs, Mr Spallanzani next presents us with a very minute and accurate description of what have been called their eggs. From this it appears that the tadpole does not come out of the egg, but that the egg is transmuted into a tadpole; or rather, that the egg is nothing but the tadpole wrapt up and concentrated; which, in consequence of fecundation, is evolved, and assumes the lineaments of an animal. From this he deduces the following consequences: 1. As these supposed eggs existed in the ovarium before their descent through the oviducts into the uterus, and long before fecundation, the fœtus existed in the mother's body long before fecundation: 2. Although the evolution of these fœtuses is never



so considerable and quick as after fecundation, it is however remarkable before that time; for when in the uterus, they are about sixty times larger than when they adhere to the ovarium: 3. Besides the foetus, the amnios and the umbilical cord exist also before fecundation.

In the second chapter, Mr Spallanzani treats of the generation of the tree frog. The copulation here has been said to continue for three whole days. But our author has seldom observed it for more than a few hours. The eggs, as they have been called, are also in this species chiefly impregnated only after they are discharged. In some instances, however, the eggs of the uterus, nearest the anus, are impregnated before they are discharged. This shews, that the semen sometimes penetrates a little way into the body of the female, whether it be projected by the male, or whether the eggs, already fecundated after their discharge, are sometimes retracted, when the female is unexpectedly seized by the observer.

In the case of the tree frog, as well as of the green frog, Mr Spallanzani is persuaded, from accurate observation, that tadpoles exist in the female

male

male before fœcundation. And this leads him to correct several mistakes of Mr Roefell, who was of a different opinion.

He next treats of the generation of the Toad, denominated by Mr Roefel, *Bufo terrestris dorso tuberculis exasperato*. The amours of this animal are very early in the spring; often in March, sometimes even in February, before the snow is melted. Tho' the male is not above a fifth of the size of the female, yet he holds her so fast that she cannot disengage herself from his embraces. Copulation lasts till the eggs are discharged; which does not happen till ten, twelve, fourteen, or even sometimes twenty days, if the season be cold. And during the whole time the male makes a grunting noise, never to be observed at any other season.

In Toads, the discharge of the eggs is a very tedious process. Two cords, consisting of a viscid transparent matter, and containing a number of black globules, which are the eggs, come out from the vent, and are discharged so slowly that the eye cannot distinguish any movement in them: But in a few hours they measure several feet. The discharge generally lasts  
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about twelve hours, sometimes it will be completed in nine, sometimes it will extend to thirty hours. Mr Spallanzani found, that two entire cords measured forty-three Paris feet, and the number of eggs in them amounted to one thousand two hundred and seven. During the discharge of these cords, the male reaches them with the extremity of his body, and bedews them with semen. This is done by simple contact, so that the cord appears moistened as if with a pencil dipt in some fluid. Thus it appears, that in these animals likewise fecundation takes place without the body of the female. And here also he has found, that the bodies called eggs are tadpoles not unfolded.

In the succeeding chapter, the author treats of the generation of the foetid terrestrial toad. This species of Toad lives on dry ground all the year, excepting the season of copulation. With them it begins later than the former species, and seems to require a warmer temperature. For if the weather becomes suddenly cold, they abandon the business of generation, and retreat to dry grounds. The expulsion of the cords containing the ova begins in general, in this species, about the fifth day of their embraces,



braces, and always ends before the seventh. The eggs are here also moistened by the seminal fluid after they are discharged, and the little bodies called eggs are tadpoles in miniature.

In the fifth chapter, Mr Spallanzani treats of the generation of the water-newt, or salamander. These animals, which, during the winter, conceal themselves under ground, in the clefts of rock, in vaults, or at the bottom of deep waters, make their appearance again about the middle of February. The males are then observed to chase the females, to surround and caress them. It is not, however, till the end of March, or beginning of April, that their connection can be said to take place. About that time the male pursues the female, who at first makes a shew of flying, but soon stops of her own accord. The male then brings the lower part of his head in contact with the upper part of the head of the female. Their bodies form an acute angle, of which the point is made by the union of the two heads. In this situation, after violent agitations on the side of the male, in which he lashes the female with his tail, he emits from the aperture of the  
anus,

anus, now unusually tumid and dilated, a copious jet of semen, which mixes with the water ; and thus diluted arrives at the anus of the female, which likewise on this occasion appears more enlarged, and wider than usual. After the male has ejected this jet of semen, he rests for a while, on some occasions quitting the female. He then returns to his employment, repeating the contorsions of the tail, and emission of semen. And these alternations will sometimes continue for more than an hour. The semen of the newt is of a white colour, and in consistence resembles thick milk. Thus then it appears, that copulation is not necessary for the fecundation of these animals.

After thus describing what happens on the part of the male, the author next proceeds to give an account of the progress on the part of the female. Having premised some account of the ovaria, oviducts, and ova, he observes, that when the male has ejected the semen, and when from its vicinity to the female it has insinuated itself into her anus, that portion of eggs is fecundated which is nearest the vent. The amours in this species of animal last sometimes twenty, sometimes thirty days, not terminating  
till

till the females have discharged all their mature eggs. The eggs, after being brought forth, sink to the bottom of the water: But if the weather be warm, a quantity of air bubbles soon appear upon the gluten which includes them. From these gradually increasing, the eggs become lighter than water, and arise to the surface. But upon the bursting of the bubble, the ova fall again to the bottom, and rise no more. In this situation their shape begins to change. After being gradually increased and elongated, it begins to agitate itself at intervals, and at length, from progressive elongation, and evolution, it appears that the supposed egg is a real newt in disguise. They require six or seven days to pass from the illusive form of ovum to that of newt, and three or four more before they burst the amnios, and gluten, so as to swim at liberty in the water.

After stating these facts respecting the generation of frogs, toads, and newts, in the five first chapters, Mr Spallanzani offers, in the sixth, some reflections on what has been delivered. He observes, that frogs, toads, and water-newts, ought to be removed from the class of oviparous animals, to which they have been hitherto



hitherto referred, and placed among the viviparous. The deposition of the ova in water, and not in that of rapid streams, but of ditches, lakes, and ponds, where it either stagnates or runs slowly, shews a careful provision in the animals for the continuation of the species. For the long-continued and close attachment of the males to the females, Mr Spallanzani observes, that he can assign no other cause, than that physical necessity which compells individuals of different sexes to approach each other. The copulation must last till their mutual necessities are satisfied; this necessity in the female consists in the expulsion of the foetuses, and in the male in the emission of semen. The impulse on the part of the male is so strong, that a great variety of injuries, nay even the amputation of limbs, and decapitation itself, were not sufficient either to hinder the embraces or the fecundation.

Though daily experience shews, that in an immense number of animals fecundation takes place within the body of the female, yet this is not an universal law of nature. And besides frogs and toads, there is reason to suppose that fecundation is external also in scaly fishes, while recent observations seem to have con-

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firmed the certainty of external fecundation in bees. Though the number of animals in which we are certain that external fecundation takes place be but inconsiderable, Mr Spallanzani is of opinion, that the industry of observers will increase it.

From what happens in the generation of frogs, Abbé Spallanzani thinks, that irrefragable arguments are afforded against the doctrine of Epigenesis, or that theory adopted by Mr Buffon and others, which supposes generation to depend on organic molecules. And while among those naturalists, supposing the foetus already formed and pre-existing, and that fecundation only unfolds them and renders them visible, there are some who suppose them pre-existent in the male, others in the female, our author is led to adopt the latter opinion. He thinks it clear, that in the case of the frog little foetuses are found in the ovaria, at least a year before these animals seek each other for the purpose of generation; and therefore they do not pass from the male to the female during the act of fecundation. And from this, conjoined with the observations of Dr Haller, shewing that in birds the young exists in the female

female before fecundation, he is led to the general conclusion of the pre-existence of the foetus in the female in every case.

The seventh and last chapter of this dissertation is employed in refuting some objections made against the pre-existence of the germ in the female by Dr Pirri, a celebrated physician and philosopher at Rome. But as this answer principally consists in shewing that his meaning has been misunderstood, and misquoted by Dr Pirri, we reckon it unnecessary to enter into particulars; and shall only observe, that it is concluded by a letter from Mr Bonnet at Geneva, to Abbé Spallanzani, in which Dr Pirri is treated with very great severity for want of accuracy and fidelity in quoting authors.

Without pretending to enter into this controversy, we shall only beg leave to observe, that, even supposing we were to allow the germ in every case to be pre-existent in the female; yet every one who pays due regard to the influence which, in the human species, the colour of the male parent has upon the children he begets, and to the production of mules with some of the brute creation, must at least admit, that the evolution of the germ not only cannot take place



place without the influence of the male semen, but that the particular mode of evolution is very much dependent on the particular semen by which that germ is impregnated.

The subject of the second dissertation, is the artificial fecundation of certain animals. And he first treats of the artificial fecundation of the terrestrial toad with red eyes, and dorsal tubercles. He separated a female of this species of animal from the male, when, from the swelling of her belly, there was reason to suppose that the expulsion of the cords containing the ova would soon follow. In a few hours, after the female had been placed by herself, in a vessel full of water, the cords began to appear. When about a foot was excluded, he cut it off. He left one half in the vessel, and took out the other, in order to wet it with semen, which he procured from the male, that had been separated from the female, and which he had put into a watch-glass. This liquor he spread with a pencil on the cord, which, after this operation, was placed in a vessel of the same water as that in which the unimpregnated portion lay. For five days he could perceive no apparent difference between the impregnated and unim-

pregnated portions. But on the sixth, he began to conceive hopes that the application of the seminal liquor had not been ineffectual. For then many of the tadpoles, in the portion which had been artificially impregnated, began to assume an elongated figure. On the seventh day, with manifest elongation, there was a visible increase of bulk. On the eleventh, he perceived them moving within the amnion; and on the thirteenth, they quitted their membranes and swam about the water. On the other hand, the unimpregnated tadpoles began to corrupt, and soon turned putrid.

On a repetition of similar experiments he found, that in a portion of cord thus artificially impregnated, evolution and animation of the germs, took place in precisely the same time, as in another portion naturally impregnated. He found, that by the artificial application of the semen, germs taken out of the uterus of the female, by opening the abdomen, could be fecundated as well as those which were naturally expelled. Though the semen of the toad in general abounds with spermatic worms, yet when the semen was totally destitute of these animals, he found it to be as effectual in giving  
fecunda-

fecundation, as when it most abounded with them. Here, however, it may be asked, Whether, although these animals were not visible, it is not probable that they did not also exist in this semen in a state to be afterwards evolved? There can be no doubt, that animals must often be present in fluids, in states when they cannot be detected by our senses, or the aid even of the best glasses. If, therefore, they be generally even visible in the semen, is there not reason to infer that they are always present.

Upon different trials, Mr Spallanzani was never able to fecundate germs taken either from the ovaria, or even the upper part of the oviducts. Nor was he able to produce impregnation from injecting semen, at an opening made into the cavity of the abdomen; and thus immediately applying it to the ovaria, although the germs were afterwards discharged at the anus in a state of perfect health. This he ascribes to their not being then surrounded with mucus, which he considers as necessary for their immediate nutrition after animation.

Having produced artificial fecundation with semen from the vesiculæ seminales, he next tried whether this effect would also be produ-



ced by the fluid expressed from the testicles. From this he found similar success, both fluids producing their effects in nearly the same time.

In the second chapter, Abbé Spallanzani relates the trials which he made for the artificial fecundation of the water newt. He was never able to obtain it by employing the semen in its pure state. But upon his want of success, it occurred to him, that the semen, when applied in the natural way, is diluted with water. And when he tried both the semen and the juice obtained from the testicles, previously diluted, artificial fecundation was produced.

In the trials which he made for artificial fecundation of the tree frog, and green aquatic frog, which are described in the third chapter, he found very little difference from what has been related above. He found, that an inexpressibly small quantity of semen is sufficient for fecundation. Three grains of semen, diffused even in twenty pounds of water, retains some portion of its virtue, though more than a pound and a half seemed to be prejudicial. And in every respect the juice of the testicles was of equal efficacy.

From these experiments, Abbé Spallanzani  
draws

draws some reflections, with which we are presented in the fourth chapter. He contends, that as the females of several amphibious animals contain in their uterus fetuses completely generated, before the approaches of the male, and as artificial fecundation takes place with semen without worms, the systems of the Epigenists, and of the Vermicalists, are thereby completely overturned.

He contends, that the semen penetrates into the body of the tadpole, by pores on the surface of the membranes for its admission. And he considers the seminal fluid as being a stimulus, which, penetrating to the heart, and powerfully irritating the internal parts, excites more frequent and stronger pulsations; whence arises the manifest extension of parts, and the animation which follows impregnation.

From what happens in the case of mules, Mr Bonnet, for whom our author expresses the the highest veneration, had inferred, that the semen is not only the stimulant, but also the nutriment of the foetus. And Dr Haller, in part at least, adopts the same opinion. For he considers the evolution of the hair, the horns, and the crest, as owing to the sperm received into



the blood, acting as an impelling and stimulative principle. But from the inconceivably-small quantity of semen, which in the case of the toad and frog is sufficient for fecundation, the prolific fluid cannot, he thinks, with any probability be supposed to perform the office of a nutritive principle.

In the succeeding chapter, Mr Spallanzani proceeds to consider, whether the gross visible part of the seed be necessary to fecundation of man and animals; or whether this be effected by the invisible attenuated part, usually called the seminal vapour, or aura. After giving a summary view of the arguments formerly employed on both sides of this controversy, all of which he considers as unsatisfactory, he relates some experiments, in which tadpoles were exposed for a considerable time to the vapour of semen, but no fecundation took place. From many experiments of this kind, it appears that fecundation is not the effect of the aura, but of the gross part of the seed.

It had been conjectured by Mr Bonnet, that fecundation might perhaps be effected by means of the electric fluid. This led Mr Spallanzani to try the effect of electricity upon tadpoles.

But



But neither by this, nor by any other stimulating fluid, was he able to produce the desired effect. He found, however, that the electrical fluid accelerates the growth of fecundated tadpoles.

As we learn, both from ancient and modern history, that the seed of one animal frequently impregnates another, when there is a near resemblance between them, Mr Spallanzani was led to entertain hopes, that he should obtain intermediate productions, by impregnating the embryos of one species with the prolific liquor of another. But after a great variety of trials, he found, that the semen of frogs and toads cannot reciprocally impregnate the females of a different species, neither could he ever make toads copulate with frogs. And after having repeatedly moistened the embryos of frogs and toads with the seminal fluid of the newt, evolution did not take place in any one instance.

When Mr Spallanzani was about to conclude this dissertation, he thought it might not be amiss to try to fecundate some of those animals in which it is certain that impregnation takes place internally. He took the unimpregnated eggs

of the phalena originating from the silk-worm, and moistened some of them with a large quantity, others sparingly, with semen obtained from the genital organs of the male. But all these trials were fruitless, when made with that species of which the eggs are hatched only in the spring. He afterwards tried another species, which produces three generations in the year. In this he was more successful. He procured fifty-seven worms at two trials.

Having thus succeeded with an oviparous animal, he resolved to try artificial fecundation with one of the viviparous kind. For this purpose he chose a bitch spaniel, of a moderate size ; and suspecting from certain appearances that she would soon be in heat, he confined her in an apartment of which he always kept the key himself. On the thirteenth day of her confinement she began to shew evident signs of being in heat, and on the twenty-third she seemed to be fit for the admission of the male. He then obtained nineteen grains of semen, furnished by a spontaneous emission from a young dog of the same breed. This he injected into the female by means of a small syringe, heated to about the natural temperature of the animal.



animal. Two days after the injection, the bitch went off her heat, and in twenty days her belly appeared swoln, which induced him to set her at liberty on the twenty-sixth. After this, the swelling of the belly gradually increased, and on the sixty-second day after the injection, she brought forth three lively whelps, two males and one female; resembling, in colour and shape, not only the bitch, but the dog also from which the seed had been taken.

In this manner then did the Abbé Spallanzani succeed in fecundating a quadruped; and he tells us, he has no difficulty in believing, that, by proper precautions, we may thus be able to give birth to some large animals, without the concurrence of the two sexes.

To these two dissertations our author has annexed two letters, written to him by Mr Bonnet of Geneva, on the same subject, in consequence of Mr Spallanzani's having transmitted to him some account of his discoveries. In these are contained many interesting and ingenious remarks: But as they especially refer to particular paragraphs in Mr Spallanzani's dissertations, and can be readily understood, only by those who have the work before



before them, we shall not here endeavour to give any analysis of them ; but shall proceed to the third and last dissertation contained in the volume before us, in which Mr Spallanzani treats concerning the generation of plants.

He sets out with observing, that the three principal systems respecting the generation of animals have been transferred to plants. Some think, that the embryos pre-exist in the ovary ; others, that they are transported thither in the impregnating powder ; while a third set believe, that they are generated in the ovary by the combination of two fecundating principles, the one furnished by the pistil, the other by the stamina. To discover whether any of these opinions was well founded, and to arrive at the truth, Abbé Spallanzani instituted a great number of experiments on different vegetables ; of which a particular account is given in the first, second, third, and fourth chapters of this dissertation. The limits of our work, however, will not permit us to enter into a full detail of these. We shall therefore content our ourselves, with presenting to the reader some account of the conclusions he draws from them in the fifth chapter.

Though,

Though, from attending to the progress of the seed of plants, there is some reason for believing that the embryos of plants pre-exist in the powder of the antheræ, yet from the experiments which Mr Spallanzani made, in which all access of pollen to the ovaria was prevented, he concludes, that the embryo does not depend on the powder of the stamina, and is not the result of two principles, one depending on the pollen, and the other on the pistil ; but that it exists in the ovarium, independently of this powder.

Supposing the embryo to belong to the ovarium, it may be either mechanically formed there, or it may pre-exist. His experiments however afford, he thinks, direct proofs, that though the embryo does not appear, it really exists ; it is organized when its organization cannot be seen.

In most cases, the embryo, or plantule, is evidently attached to the seeds. Hence, he thinks, there is ground to infer that it is always so, tho' the connecting media be either too small or too transparent to be visible. And when it is considered that the embryo and lobules thus form as it were one whole with the seeds,  
which



which evidently exist before fecundation, he thinks it highly probable that the embryo likewise pre-exists that period. And he thinks it probable, that the pre-existence, which in his opinion evidently takes place in some plants, equally holds in all of them, although all have not been examined with the same attention. But notwithstanding this general doctrine, he admits, that in some plants, as appeared from his experiments with the basil and the annual mercury, the pollen is necessary for fecundation. And he expresses a wish, that some naturalists would extend the experiments made for the artificial fecundation of the palm, to the latter of these plants. But if mercury and basil require pollen for their fecundation, his experiments, he thinks, tend demonstratively to shew, that with two species of the pumpion, with hemp and spinach, fructification has no dependence on this powder. And he contends, that it is perfectly conformable to what we every day observe in animals, that some plants should require the influence of pollen, to multiply the species, while it is not necessary to others. Numberless animals are, he observes, incapable of multiplying without the concurrence of both sexes ;



sexes; or, at least, without the intervention of semen. This is evident in man, quadrupeds, birds, fishes, reptiles, and insects. But a vast number, on the contrary, propagate without such means; as for instance, the Polypes, under which denomination is included an immense variety of small animals, inhabiting the bottom of fresh water, of ditches, ponds, puddles, and of the salt water of the sea. Many species are multiplied by a natural division of the body; some splitting into two portions, some into four, &c. Some are oviparous, some viviparous, and all strictly hermaphrodite; each individual propagating its kind, without needing the concurrence of another. Thus he thinks it may, and really does come to pass with some plants, which multiply without the influence of the fecundating dust.

We have thus then endeavoured to give some view of those ingenious and elaborate dissertations, on a subject no less curious than it is difficult; and which, at the same time, may justly be considered as an object of admiration. He himself observes, that he is far from thinking he has entirely dissipated that darkness with which this subject is involved. Yet, he  
hopes,

hopes, that by means of his discoveries it has been somewhat cleared, and that a light less feeble and uncertain now shines through it. And, we apprehend, there is not any reader, who, after a careful perusal of his treatise, will not allow him this merit. There can be no doubt, that by due attention to the discoveries which he has made, and the suggestions he has thrown out, future philosophers may prosecute their researches with greater success, in unfolding what has hitherto been considered as one of the mysteries of nature.

## VI.

*Account of the Electrical Eel, or the Torpedo of Surinam.* By Wm. Bryant, Esq. Vide *Transactions of the American Philosophical Society.* Vol. II. Quarto. Philadelphia.

THE author of this paper, who resided for some time at Surinam in South America, a colony belonging to the States of Holland, and  
abounding

abounding with many natural curiosities, considers this animal as one of the most surprising of them. By the Dutch it is called Beave Aal, and by the English inhabitants the Numbing Eel. It is caught in nets among other fish, chiefly in muddy rivers. In size and colour, it is, he tells us, not unlike a common eel of Europe or America: and in its shape there is still a greater resemblance; excepting that it is thicker in proportion to its length, and the head is more flat, and not so pointed. It comes to the surface of the water to breathe air.

On touching this fish, as it lies in the water in a tub provided for it, a sudden and violent shock is received. This is, we are told, in all respects like that which is felt on touching the prime conductor of an electrical machine, when charged with the electrical fluid from the globe. Like that, it chiefly affects the ends of the fingers, and the elbows. When the tail of the fish is gently held by one hand, and the head touched with the other, a very violent shock is felt in both elbows, and through the breast and shoulders. Mr Bryant at first imagined, that the violence of the shock proceeded from both arms receiving it at the same time; and  
that



that the pain was no more than that of the two shocks added together. But in this he found himself mistaken ; for when seven persons joined hands, if, when the first gently held the tail, the seventh touched the head, all were affected at the same instant, in both elbows, in the same manner as happens in electrical experiments.

Mr Bryant finds, that the shock of the electrical eel may be received through metallic substances. Thus he was strongly affected on touching the fish with an old sword-blade. But if it was armed with sealing wax, no effect was produced ; nor had it any obvious effect when touched with glass. But notwithstanding this, no diminution of quality is produced, by placing the tub which contains the fish on glass bottles. And our author is at a loss to conjecture, whether it has an unaccountable faculty of collecting the electrical fluid from the surrounding waters, or through the body of the person touching it, or has in its own body a large fund which it can discharge at pleasure.

He has in general found that it has no effect on the human body when touched with a piece of wood, or indeed with any other substance

stance not metallic. Yet an accident discovered to him, that on some occasions the effect is very sensible through wood. He accidentally stood by, one morning, while a servant was emptying a tub, containing one of the largest eels of this kind he had ever seen, and which had been but lately caught. He had lifted the tub entirely from the ground, and was pouring off the water to renew it. When the fish was left almost dry, the negro who held it received so violent a shock that he let the tub fall. Another negro was then called to his assistance. Mr Bryant made them lift the tub free from the ground. And when in this way they were pouring off the remains of the water, both of them received such smart shocks, as obliged them to desist from emptying the tub in that manner. Upon similar trials, Mr Bryant received similar shocks himself.

Mr Bryant is disposed to conjecture, that this animal has the power of communicating the shock when and with what degree of force it pleases; and that this power serves it as a weapon of defence against its enemies. For he has observed, that when it is first taken hold of, the shocks are tolerable; but when the



animal perceives itself to be confined, they are much more violent. This he experienced one day, from taking hold of a fish by the middle, and lifting it partly out of the water. He received so smart a shock, that it occasioned a strong contraction in the bending muscles of his fingers, so that he could not immediately let it go; but on endeavouring to disengage his hand, he threw it upon the ground. When he took hold of it a second time, to return it into the tub, he was more strongly affected than at first, and that not only in his hands and arms, but throughout the whole body. The fore part of his head, and the back part of his legs, suffered principally, and in the same manner as on receiving a very smart shock from a highly-charged phial in electrical experiments.

He observed, that the sensation occasioned by the shock, on touching different parts of the fish, was different. He was at first inclined to think, that this might be owing to its having an extraordinary faculty, of containing more of the fluid in one part of its body than another. From the extremity of the tail, to about one third of its length upwards, it occasions rather a numbness and tingling, than pain. But,  
upon



upon applying the ends of the fingers to the back, head, and upper part of its body, it causes a sharp prickling pain. This, he is now disposed to think, may be accounted for, from a difference in the texture of the surface of the skin, in a manner similar to the electrical fluid coming from a glass tube ; which is well known to be different, when its surface is altered from being rubbed with different substances.

From these observations, there can be no doubt that the peculiar properties of this animal depend upon electricity.

## VII.

*Observations on the Numb Fish, or Torporific Eel.*  
By Henry Collins Flagg, South Carolina.  
Vide *Transactions of the American Philosophical Society*. Vol. II. Quarto. Philadelphia.

**I**N this paper, we are presented with several curious facts concerning this animal, in addition to those contained in the former.

The apparent difference, he observes, between the torporific and common eel, is, that the former is flatter on the back and head, the the upper part of which is perforated with several holes, and has on each side, behind, a small fin, which is voluntarily elevated or depressed as the animal is pleased or not. The body is larger in proportion to its length, and it has a broad fin connected to the belly, and continued to the tail. Mr Flagg has seen some of them four feet long. The first fish of this kind which he got, he received from a negro in a wicker basket. When he set the basket on the ground, he received a considerable shock, exactly similar to an electrical one. The same thing happened when he turned the fish out of the basket into a tub of water. He has found, that the shock is greater when the fish is enraged, but frequently repeated touches seem to exhaust this strange power. If one person hold his finger in the water at an inch distant from the fish, and another touch it, both feel a shock equally severe. There are, however, some individuals incapable of being affected by it. Thus Mr Flagg knew a lady who could handle this fish at will, without feeling

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ing any inconvenience. Others are affected to an uncommon degree. Mr Flagg relates the case of a negro, who, upon attempting to grasp an eel with both hands, received such a shock, that confirmed paralysis was the consequence; from which he recovered only by slow degrees, at the end of several years. And Mr Flagg thinks, that, in general, the numbness occasioned by touching the eel continues longer than from an electrical shock of the same degree of force.

With an eel in a very languid state, though he could perceive no shock, by touching it on or near the tail, yet when he applied his finger near the belly, the torporific power was very considerable, although the fish was now almost dead. This species of eel, he tells us, is frequently eat by the negroes, and is reckoned very delicious. Its common food is shrimp, or any small shell fish. Mr Flagg received no shock, when he applied to the eel an iron rod, held between two pieces of glass. And the same thing took place when the rod was held in a silk handkerchief. Upon repeatedly trying the effects of this fish on the needle of a compass, he could never perceive that it



had any influence. This eel, we are told, raises its head every few minutes above water, as if to respire.

From these additional circumstances, respecting this singular animal, farther and incontestible proof is afforded of its electrical power.

### VIII.

*Account of a Worm in a Horse's Eye. By F. Hopkinson, Esq. Vide Transactions of the American Philosophical Society. Vol. II. Quarto. Philadelphia.*

THE fact which Mr Hopkinson here relates deserves the attention of the physician and physiologist, if not for its importance, at least for its singularity. And it is this circumstance which has led him to record it in the American philosophical transactions. Having heard from several of his acquaintance that a horse was to be seen in Philadelphia, kept by a free negro in Arch-Street, in one of whose eyes there was a living serpent, Mr Hopkinson, though

though at first disposed to disregard the report, had the curiosity to visit it, taking a friend along with him.

He examined the eye with all the attention in his power ; expecting, as he tells, either to detect a fraud, or to discover the grounds of a deception. He was, however, much surprised to see a real living worm within the ball of the eye. This worm was of a clear white colour, and in size and appearance much like a piece of fine bobbin. It seemed to be from two and a-half, to three inches in length. But this could not be duly ascertained, its whole length never appearing at one time, but only such a portion as could be seen through the iris, which was greatly dilated. The animal, we are told, was in a constant lively vermicular motion ; sometimes retiring so deep into the eye, as to become totally invisible ; at other times, approaching so near to the iris, as to be plainly and distinctly seen, or at least so much of it as was within the field of the iris. He could not, however, distinguish its head, neither end being perfectly exhibited while he viewed it. And indeed its motion, he tells us, was so brisk and constant, that so nice a scrutiny was not to be expected.



There was a considerable inflammation and swelling of the parts contiguous to the eye-ball, with some discharge. And the horse seemed to have great pain from the eye, so that it was with difficulty it could be kept open for more than a few seconds at a time ; and Mr Hopkinson was obliged to watch favourable moments for a distinct view of the animal. He was inclined to think the horse quite blind in this eye, for it appeared as if all the humours were confounded together, and the worm had the whole orb to range in. The humours of the eye were even beginning to grow opake, like a chilled jelly, at the time when Mr Hopkinson saw it, and he was informed that they afterwards became entirely so.

As a farther evidence that in this affair there was no imposition, deception, or mistake, we may observe, that in another paper, contained in the same volume of the American philosophical transactions, an account is also given of it by Dr Morgan, Professor of the Theory and Practice of Physic in Philadelphia, in which he treats of a living snake in a living horse's eye. He gives, in almost every particular, the same account with Mr Hopkinson. He observes, that



that the animal, when he saw it, was as thick as a knitting needle, or piece of common twine. Though Dr Morgan considers this as being a singular occurrence, and almost unprecedented in the annals of medicine, yet he observes, that of the fact there could be no doubt. And he mentions several other cases, in which animals of unusual kinds were produced in the living body, equally difficult to explain; particularly, cases of the guinea-worm, jointed worms generated in the liver, and the like.

After stating the difficulties in explaining the generation of those animals, he acknowledges himself lost in wonder, and leaves the explanation to some happy genius who may afterwards arise.

## IX.

*An inquiry into the cause of the increase of Bilious and Intermitting Fevers in Pennsylvania, with hints for preventing them. By Benjamin Rush, M. D. Professor of Chemistry in the University of Pennsylvania. Vide Transactions of the American Philosophical Society, vol. II. Quarto. Philadelphia.*

**D**R RUSH sets out with remarking, that Pennsylvania, for some years past, has become more sickly than formerly. And fevers, he observes, which a few years ago appeared chiefly on the banks of creeks and rivers, and in the neighbourhood of mill-ponds, now appear in parts remote from all these, and in the highest situations. This change, with respect to the healthiness of the country, he thinks may be traced to three causes.

The first he mentions, is the establishment and increase of mill-ponds. There are, he observes, whole counties in Pennsylvania, in which  
inter-

intermittents were unknown until the waters in them were dammed up for the purpose of erecting mill-ponds.

The second cause he mentions, is the cutting down of wood under certain circumstances. It has, he tells us, been remarked, that the intermittents on the shores of the Susquehannah have kept an exact pace with those passages which have been opened from the banks of the river, by cutting down the wood which formerly grew in its neighbourhood. By these, he imagines that the marsh effluvia have an opportunity of being propagated upwards. He tells us, he remembers the time when intermittents were known only within half a mile of the river, whereas now they are to be met with ten miles from it, in some parts of the State. Here he points out a distinction between the effects of clearing and cultivating a country. While he is of opinion that clearing a country makes it sickly in the manner mentioned, he contends, that cultivating it, by draining swamps, destroying weeds, burning brush, and exhaling the unwholesome and superfluous moisture of the earth, by frequent crops of grains, grapes, and vegetables of all kinds, render it healthy.

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The third and last cause which he points out, is the unequal quantities of rain which have fallen in Pennsylvania within these last seven years. While, from the uniformity of seasons, creeks and rivers were confined to steady bounds, there was, he thinks, little or no exhalation of febrile miasmata from their shores. But by the dry summers of 1780, 81, and 82, the creeks and rivers were reduced far below their ancient marks. And by the wet springs of 1784 and 85, they were swelled beyond their natural heights, from which they again fell in the summer. In both cases, a large and extensive surface of moist ground was left exposed to the action of the sun, and, of course, he thinks, to the generation and exhalation of febrile miasmata.

After stating these causes producing the increase of intermitting fevers, he comes next to suggest a few hints for obviating and preventing them, and for rendering the country again healthy.

The first thing he recommends, is the planting of trees round all the mill-ponds. And he advises, that the trees be in greatest number, and closest together, to leeward of the ordinary  
current

current of the summer and autumnal winds. These trees may, he thinks, act in a small degree mechanically. By sheltering the pond from the action of the sun, they lessen exhalation, as well as obstruct the passage of the vapours that are raised to the adjacent parts. But they act likewise chemically. For it has, he observes, been demonstrated, that trees absorb unhealthy air, and again discharge it in a highly purified state, in the form of what is now called dephlogisticated air.

The second mode of preventing fevers which he points out, is to let the cultivation always keep pace with the clearing of the lands. And nature has, he thinks, in this instance, connected duty, health, and interest together. He recommends, that every spot covered with moisture, from which wood has been cut, be carefully drained, and afterwards ploughed and sowed with grass seeds ; that weeds of all kinds be destroyed ; and the waters be so directed as to be prevented from stagnating in any part of their course.

These he considers as the two principal means of extirpating intermitting and bilious fevers from Pennsylvania. But as these are slow in their operations,



operations, he subjoins a few directions for preventing fevers till they can take effect.

From the influence which fire, or the smoke or heat which issue from it, have in destroying the effects of marsh miasmata on the human body, he advises that large fires should be made every evening of brush-wood, between the spots from whence noxious exhalations are derived and the dwelling house ; being as near the latter as is safe, and not disagreeable : And during the sickly season, he recommends that fires should be kept in every room in the dwelling house ; even when the heat of the weather makes it necessary to keep the doors and windows open.

He advises, that in sickly situations, woollen and cotton should be preferred to linen clothes. In proof of the advantage of this, he mentions the benefit that has been derived from it in the island of Jamaica. And he considers the efficacy of woollen clothes in wet and cold situations, in preventing fevers of all kinds, as an undeniable fact.

He recommends, that the diet during the sickly months should be generous. Wine and beer, in place of spirits and water, should be  
the



the drinks of this season. A large proportion of animal food should be employed. He considers salted meat as preferable to fresh, and he advises that it should always be well seasoned.

The evening air should, he thinks, be avoided as much as possible ; and the morning air, he tells us, should never be breathed until the body has been fortified with a little solid aliment, or a draught of bitters.

Lastly, He observes, that too much cannot be said in favour of cleanliness. While the body should be bathed and washed frequently, equal care should be bestowed on every species of apparel. And offal matters, especially those of a vegetable matter, should be removed from the neighbourhood of a dwelling-house.

Though it will not be imagined that these modes of preventing fever are equally applicable to every situation, yet there can be no doubt, that, if they be well calculated for Pennsylvania, they may be also useful elsewhere. And we are inclined to think, that there are few situations in which some of them may not be put in practice with advantage.

## X.

*An account of the late Dr Hugh Martin's Cancer-powder, with brief observations on Cancers. By Benjamin Rush, M. D. &c. Vide Transactions of the American Philosophical Society, vol. II. Quarto. Philadelphia.*

THOUGH from the account given in this paper it would appear that Dr Martin can hardly be considered in any other light than that of an empyric, yet the reputation which his nostrum acquired was such as justly to claim the attention of Dr Rush. And when we reflect that the inventions, and even the temerity of quacks, has given birth to some of the most important improvements in medicine, such investigations cannot be thought unworthy of the inquiries of the philosophical and benevolent physician.

Dr Martin had been for some time a regimental surgeon, stationed in the back parts of Pennsylvania, at Fort Pitt. And his advertisements

ments bore, that he was able to cure cancer, by a medicine which he had discovered in the woods in the neighbourhood of that garrison. After his medicine had gained considerable credit in Philadelphia, Dr Rush took the liberty of waiting upon him, and of asking him some questions respecting his discovery. The answers he gave were calculated to make Dr Rush believe that his medicine was of a vegetable nature, and that it was originally an Indian remedy. He shewed some of it, which appeared to be the powder of a well-dried root of some kind ; and he admitted Dr Rush to see him apply it in two or three cases. In some instances, Dr Martin applied a powder to the parts affected. In others, he only touched them with a feather, dipped in a liquid which had a white sediment, and from which Dr Rush inferred that it was a vegetable root diffused in water.

The effects resulting from these applications were very considerable ; and Dr Rush witnessed their efficacy in several instances. In some cancerous ulcers, the cures he performed were complete : but where the cancers were much connected with the lymphatic system, or accompanied with a scrophulous habit of body, his



medicine always failed, and in some instances did evident mischief.

Dr Rush was anxious to discover a medicine which promised relief, even in a few cases of cancer. As he observed that the effects of Dr Martin's powder shewed it to be of an acrid nature, and as he supposed all caustic vegetables to be nearly the same, he had recourse to different ones. He tried in a similar manner the phytolacca, the stramonium, the arum, and some others, in hopes of seeing from them the same effects as from Dr Martin's powder. But in these he was disappointed. They gave pain, but they performed no cures. He was afterwards furnished with a powder by a gentleman from Fort Pitt, which, from a variety of circumstances, he inferred to be of the same kind with that used by Dr Martin. He applied this to a fungous ulcer, but it did not produce that degree of pain, inflammation, and discharge, which he had been accustomed to see from the application of Dr Martin's powder. After this, he should probably, he tells us, have suspected that the powder was not formed from a simple root, had not Dr Martin, upon all occasions, continued to assure him that it was wholly a vegetable preparation.

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Dr Martin died in the year 1784 ; and, a few weeks after his death, Dr Rush procured from one of his administrators a few ounces of the powder, with the view of examining it minutely. Upon throwing the powder, which was of a brown colour, upon a piece white paper, he could distinctly perceive a number of white particles scattered thro' it. He at first suspected that these were corrosive sublimate, but the usual tests of that metallic salt soon convinced him that he was mistaken. Reflecting that arsenic was the basis of most of the celebrated cancer-powders that have been used in the world, he had next recourse to the tests for detecting it. Upon sprinkling a small quantity of the powder on live coals, it emitted the smell of garlic, a well known test of arsenic, so perceptibly, as to be known by several persons whom he called into the room where he made the experiment, and who knew nothing of the object of his inquiries. As a second test, he picked out from the powder three or four grains of the white particles; these he bound between two pieces of copper, which he threw into the fire. After the pieces of copper became red hot, they were taken out; and, when they were cooled, it appeared that an evi-



dent whiteness was imparted to both of them. To these two he added still a third test. He infused a small quantity of the powder in a solution of vegetable alkali in water, for a few hours, and then poured it upon a solution of blue vitriol in water. The colour of the vitriol was immediately changed to a beautiful green, and afterwards precipitated. From all these tests then, there could remain no doubt that Dr Martin's powder contained a proportion of arsenic, which probably was its active basis.

Dr Rush concludes this paper with a few remarks upon this powder, and upon the cure of cancers and foul ulcers of all kinds. He observes, that the use of caustics, in cancers and foul ulcers, is a very ancient and universal practice; and he believes arsenic to be the most efficacious of any that has ever been used. The great art of applying it successfully, is to dilute and mix it in such a manner as to mitigate the violence of its action; and he thinks Dr Martin's composition was happily calculated for this purpose.

He thinks that the arsenic used by Dr Martin was the pure white arsenic; and he conjectures, that the proportion which it bore to the vegetable



vegetable powder, could not be more than one fortieth part of the compound. He thinks that the vegetable matter, used in the powder given to him, was the root and berries of the solanum lethale. But he has reason to believe that Dr Martin employed different vegetable substances at different times.

He is of opinion, that Dr Martin's want of success in many cases arose from his using it indiscriminately in all cases. He thinks, that in schirrous and cancerous tumours, the knife should always be preferred to the caustic. And in cancerous ulcers, attended with a scrophulous habit of body, such particularly as have their seat in the breasts of females, it can only, he thinks, protract the patient's misery. Most of the cancers which Dr Martin cured by it were seated on the nose, or cheeks, or upon the surface or extremities of the body.

It is not, he tells us, in cancerous cases only, that Dr Martin's powder has been found to do service. He has seen this powder used with advantage in sores of all kinds, and from a variety of causes, when they have been attended with fungous flesh, and callous edges.

Every one conversant in practice well knows,

that these affections, which this remedy is said to combat, are frequently of the most obstinate nature. And although, as Dr Rush justly remarks, we are not indiscriminately to expect from its use the cure of every cancer, yet if it be attended with advantage in the cases which he has pointed out, the labour he has bestowed in the investigation of it must be an acceptable and important service to the public.

## XI.

*Observations on the cause and cure of Tetanus.*

*By Benjamin Rush, M. D. Professor of Chemistry in the University of Pennsylvania. Vide Transactions of the American Philosophical Society. Vol. II. Quarto. Philadelphia.*

**D**URING the course of private as well as military practice, Dr Rush had met with several cases of tetanus in which opium, the ordinary remedy employed, proved ineffectual, after the fairest trial. This led him to a more minute investigation of the disease; and reflecting,

ting, that it is a disorder of warm climates and seasons, he was led to ascribe it to relaxation. He was, therefore, led to attempt the cure by a different set of medicines.

Soon after adopting this resolution, he was called to visit Col. John Stone, who was wounded through the foot. When Dr Rush saw him, he was in the third day of a tetanus. His spasms were violent, and his pains so exquisite, that his cries were heard near an hundred yards from his quarters. His head was thrown a little backwards, and his jaw had become stiff, and contracted.

He was at that time under the care of a skilful regimental surgeon, who had poured down opium in large quantities, but without effect. Dr Rush immediately omitted the opium, and had recourse to wine, and the Peruvian bark. He took from two to three ounces of the latter, and from a bottle, to three pints of the former in the day. Even in the space of a few hours, Dr Rush had reason to be much satisfied with the success of this practice. His spasms and pains were less frequent and violent, and he slept for several hours, which he had not done for some nights before. With the same



view that wine and bark had been employed, a blister was applied between his shoulders, and two or three ounces of mercurial ointment rubbed in, upon the outside of his throat. He continued to mend gradually under the operation of these medicines, though for some weeks he was affected with spasms in his wounded foot.

In the summer 1782, Dr Rush was called to visit a servant girl who had brought on tetanus by sleeping in the evening, on a damp brick pavement, after a day in which Fahrenheit's thermometer had stood at near 90°. This case was nearly as violent and alarming as that described above. Dr Rush treated her in the same manner, and with the same success. To the wine and bark he here added the oil of amber, after he began to suspect they were losing their influence. The good effects of this latter remedy were obvious. She recovered gradually, and has since that continued in good health.

In summer 1782 Dr Rush was called to a joiner, subjected to alarming symptoms, from having run a nail into his foot. He found him, the day after the accident, in extreme pain, with small convulsions, and now and then a  
twinge

twinge in his jaw. The wound of the foot was without swelling or inflammation. Dr Rush immediately dilated the wound, and filled it with lint moistened with spirit of turpentine. This, in a short time, produced a great deal of pain, and a great inflammation in his foot. It was Dr Rush's intention, to have afterwards treated this patient in the same manner he did the two former ones. But the pains and spasms of his body suddenly left him, and in twenty-four hours after Dr Rush first saw him, he complained of nothing but the pain and swelling of the foot, which, however, continued for several weeks, and did not leave him till it ended in a suppuration.

These three cases, it will readily be allowed, exhibit to the public a new and successful treatment of this disease. From these, Dr Rush draws several conclusions which will merit attention.

He infers, that the prædisposition to tetanus depends upon relaxation, and that this relaxation is generally produced by heat; tho' excessive labour, watchings, marches, or fatigue from any cause, all produce it likewise; and hence, he thinks, that it is more frequent from wounds



wounds received in battle, than from similar wounds received in any other way.

He concludes, that as tetanus seems to be occasioned by relaxation, the medicines indicated to cure it, are such only, as are calculated to remove this relaxation, and to restore a tone to the system. The bark and wine appear to him to act in this way; and though the operation of blisters be more complex, yet, in the peculiar state of irritability, which occurs in tetanus, he considers their effects as simply stimulating. Mercury, he thinks, goes even farther, and acts by promoting the inflammatory diathesis, which he considers as absent in this disease. He considers the oil of amber to act chiefly, at least, as a stimulant: and he thinks, that we are to refer the good effects derived from large doses of mustard, and from the cold bath, to their stimulant and tonic powers. The excitement of topical inflammation, by artificial means, disposes to a general inflammatory diathesis; and it is thus, Dr Rush thinks, that incisions and dilatations of the wound, particularly if they be filled with spirit of turpentine, are attended with good effects. On the same principle also he explains the benefit of a practice

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tice used by the negroes of St Croix for the prevention of tetanus; the application, viz. of a mixture of tallow and salt to their fresh wounds.

To these observations on tetanus Dr Rush adds a few words on the disorder commonly called the Jaw-fall of infants, the Trismus Nascantum of Dr Cullen.

This, he considers also as being a species of tetanus; and he tells us, that he has met with three instances of it in Philadelphia, all of which proved fatal. In these instances, the age and weakness of his patients prevented him from attempting any thing for their relief. But he mentions a fact with respect to it which he considers as of great importance. He was informed by the late Dr Cadwallader Evans, who practised medicine for several years in Jamaica, that he had many opportunities of seeing the disease in that island, particularly in the black children. In every instance after it was distinctly marked, he found it incurable. But having reason to infer, from some circumstances, that it depended on the retention of meconium in the bowels, he was led invariably to purge every child born upon the estates committed to his

his care ; and, after he adopted this practice, he never met with a single instance of tetanus among children.

Tetanus, Dr Rush observes, is a disease not peculiar to the human species. He has known several instances of it in horses, from running nails into their feet, and similar accidents. It is attended with rigidity of the muscles of the neck, stiffness of the limbs, and such a contraction of the jaw, as to prevent their eating. It is in general fatal. But, in two cases, Dr Rush had the pleasure of seeing the disease perfectly cured, by applying a potential caustic to the neck, by large doses of amber oil, by plunging one of them into a river, and throwing buckets of cold water upon the other.

These instances may, perhaps, be considered as giving some confirmation of what Dr Rush has said concerning the nature and treatment of the disease with the human species.

## XII.

*The antiseptic virtues of vegetable Acid and marine Salt combined, in various disorders accompanied with putridity; communicated in a letter to John Morgan, M. D. F. R. S. and Professor of the Theory and Practice of Physic in Philadelphia. By Wm. Wright, M. D. F. R. S. of Trelawney, in Jamaica.*

DR WRIGHT tells us, that having experienced the virtues of the vegetable acid and marine salt, when combined, he has published his observations on this subject, with the sincere wish, that the remedy may prove as beneficial to mankind in general, as it has been to many of his patients, in Jamaica.

He gives the following direction for preparing this remedy. Take of lime-juice, or lemon-juice, three ounces; of marine salt as much as the acid will dissolve; of any simple distilled cordial water one pint; and of loaf-sugar a sufficient quantity to sweeten it. The dose



dose of this mixture must, he tells us, be proportioned to the age and sex of the patient, and to the violence of the disease.

He observes, that from Geoffroy's table, it appears that the fossil alkali has a greater affinity with the marine than with the vegetable acid. He finds, however, that the marine salt readily dissolves in lime-juice ; that it throws up a white scum to the surface ; and that on applying the ear near the vessel where the mixture is made, a slight hissing may be heard, similar to what occurs on the mixture of acids and alkalines. From this, he thinks it probable that part of the marine salt is decomposed. That vegetable acids and marine salt are antiseptic, has, he observes, been long known ; but these effects when mixed, he considers as a late discovery. Without farther preface, however, he next proceeds to mention particular diseases, in which this remedy has been administered with advantage.

Dysentery, he observes, is a very frequent disorder in Jamaica, and other West-India islands. Sometimes it is epidemic, especially in rainy seasons, and when provisions are scarce. After particularly describing the symptoms  
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which attend dysentery, and especially those which occurred in 1771, he observes, that it proved fatal to many people both young and old, though treated according to the most approved methods of cure. And the loss of several of his patients convinced him of the necessity of using antiseptics early in the disease.

In the treatment, a vomit seemed necessary at first to clear the stomach, and some gentle cathartic to carry off part of the offending matter by stool. But the action of these, though mild, often, he observes, increased the prostration of strength, and rendered the stools sooner bloody; nor did he find opium of any real use. Simarouba, with some, seemed to have a good effect, but with others it could not be retained on the stomach.

From a consideration of the antiseptic effects of sea-salt and the vegetable acid, Dr Wright was induced to try their effects united in the manner mentioned above. This combination acted, he tells us, like a charm. And from the use of it, he found, that the frequency of the stools, the gripes, and the tenesmus soon wore off. The stools soon became natural in consistence and quantity; the spirits, strength, and appetite returned,



returned, and the patient was restored to health in a few days. He found this medicine equally serviceable in diarrhœas.

The remittent fever, he observes, is by much the most common one which occurs within the tropics. For an accurate and just description of it, as well as for a simple and easy method of cure, he refers to the writings of Drs Cleghorn and Lind. But he remarks, that these fevers are often attended with diarrhœa, with diabetes, and sometimes with a copious discharge of saliva, as if mercury had been previously given. In such circumstances, he has never found the Peruvian bark of service. But a few glasses of the mixture mentioned above fully answered his intention, not only of removing these symptoms, but the fever also at the same time. After this, the Peruvian bark, taken in the same mixture as a vehicle, effectually secured the patient from any relapse.

Another disease, which has frequently occurred to him in the course of his practice, is the belly-ach, with inflammatory symptoms. This disease, he has found, yield with difficulty to the common practices of blood-letting, emetic tartar, mercurial purgatives, castor oil, diluents



diluents with nitre, fomentations, and clysters. He has observed in many cases, that after most excruciating belly-achs, the stools were liquid, white, small in quantity, and very foetid. The patients, worn out with pain, grew dispondent, fell into clammy sweats, and were very restless. They complained of a bad taste in their mouths, their tongues were much furred, their breath offensive, and they had a great propensity to vomit. Dr Wright formerly attempted relief from these threatening symptoms, by exhibiting Peruvian bark in various forms, in conjunction with claret wine. By these he thinks that he often saved his patient, tho' he sometimes failed of success. But when such cases now fall under his care, he has immediate recourse to the antiseptic mixture, and he has not been disappointed of success in any case in which he has hitherto used it. On its use, the stools, he tells us, become less frequent, and of a better consistence; the cold sweats disappear, and the spirits soon return with an appetite for food.

In June 1770, the putrid sore throat made considerable havock, both among adults and children in Jamaica. After describing the symptoms with which this affection was attend-

ed, Dr Wright observes, that antimonial wine, with cordials and nourishing diet, succeeded best, till the floughs or spots were removed or separated. The Peruvian bark then completed the cure. But in all cases which were accompanied with diarrhœa, a frequent attendant of this affection, he gave the antiseptic mixture with success.

In all diseases where a gargle is necessary, he employs the above mixture in preference to any other. And he finds, that it speedily cleanses the tongue, gums, and fauces, and sweetens the breath.

In the preparation of this mixture, where lemons and limes cannot be had, he thinks that vinegar, or the cream of tartar, may be substituted in their place.

From the observations that have been offered above, Dr Wright thinks it evident, that this medicine is possessed of considerable antiseptic powers, and that its virtue consists in correcting the peccant matter in the stomach and intestinal canal.

If this remedy shall be found equally successful in the hands of others, in those diseases where there is an evident putrid tendency, the  
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introduction of it into practice will doubtless be considered as an important discovery.

## XIII.

*Observations on the Typhus, or low contagious Fever, and on the means of preventing the production and communication of the disease. By D. Campbell, M. D. 8vo. London.*

IN a short preface to this treatise, Dr Campbell assigns the following reason for the publication of it. A few years ago, he tells us, a Dispensary was established in Lancaster, for furnishing the poor with medical assistance. During the last three years, a contagious fever has prevailed among those persons who were the objects of this institution, and also at some neighbouring cotton-works, in consequence of which, a great variety of cases of this complaint fell under his notice. In the course of this practice, he has so frequently seen the exhibition of opium attended with good effects, that he conceived it to be a duty he in some



measure owed to society, to point out the particular state of the disease, and the dose in which he has found this medicine useful.

Such being the laudable object of the present publication, we reckon it less necessary to give any very particular account of the observation with which we are presented in the three first chapters of this treatise, but shall confine our analysis principally to his observations with regard to the cure which is contained in the fourth chapter. We may only observe, that in the first chapter he treats of the circumstances which give rise to the typhus, or low contagious fever. And he considers it as an incontrovertible fact, that this fever is apt to be produced in consequence of persons residing in apartments where there is not a sufficient free circulation of air, especially if crowded together, and accompanied with neglect of cleanliness, and a deficiency of proper food. While those who labour under this disease emit a certain subtile effluvium, which, applied to the bodies of persons in health, is capable of producing similar symptoms in them. This effluvium is disposed to adhere to cloathing, furniture, wool, cotton, silk, or the like. And by  
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means of these the infection is often carried with greater certainty, and accompanied with more violent symptoms, than from the noxious effluvium which arises immediately from the body of the sick person.

In the second chapter, he treats of the means of preventing the production and communication of the disease, and of the steps necessary to be taken for eradicating it from such articles as may contain the infection. With regard to the prevention of the formation of the disease in the first instance, this, he thinks, will best be done, by promoting a free circulation of air in the apartments where people sleep or reside, by the practice of cleanliness in all its varieties; with respect to persons, cloathing, and habitations; and by the use of a diet sufficient in quantity and nutritious in quality, with a competent proportion of fermented vinous or spirituous liquors, especially if combined with moderate exercise and good spirits.

With a view of preventing the contagion from taking place in persons unavoidably exposed to it, Dr Campbell recommends stopping the nostrils with snuff, tobacco leaves, dosils dipt in camphorated vinegar, and similar sub-

stances, upon entering places where sickness prevails. Blowing the nose upon coming out, smoking tobacco, chewing calamus aromaticus, tobacco, ginger, or other aromatic substances, may also, he thinks, be very beneficial. He advises also, that the saliva should never, if possible, be swallowed in such places; and he recommends, before entering them, the swallowing a small portion of brandy, either in its simple state, or impregnated with aromatic or bitter substances.

Dr Campbell next treats of the means of eradicating infection, when lodged in houses, cloathing, furniture, or raw materials. Supposing a house or ship to contain the infection, every method is to be pursued to introduce and promote a free circulation of air, by opening the doors and windows, and lighting fires in open chimneys. All the varieties of cleanliness are to be practised; by scraping the floors of houses, the decks and sides of ships, and washing them first with soap lye, and afterwards with vinegar, or spirit of vitriol and water. The walls of houses are to be scraped, and a wash of lime and water applied; the lime being recently slacked, and laid on whilst it is hot; after which,



which, the farther contagion that might escape these processes is to be attempted to be removed by the proper application of fire and smoke. And the same methods of prevention and purification may be readily and effectually practised upon furniture, clothes, and similar articles.

After these observations on the low contagious fever in general, Dr Campbell, in his third chapter, gives a very distinct and minute description of the typhus, as it appeared in the town and neighbourhood of Lancaster, in the years 1782, 3, and 4; and especially in the cotton-works at Backbarrow, where the fever prevailed to a great degree. This disease, in its attack, progress, and termination, seems to have differed so little from the low, or typhus fever, as described by other authors, that we think it unnecessary to enter into particulars, especially as Dr Campbell's description hardly admits of any abridgement.

In the fourth chapter, Dr Campbell treats of the cure of this affection. Considering this fever to be perfectly analogous to that which attends the ulcerated fore-throat, he set out with the same plan of cure as he had experienced to be successful in that disorder. And

upon this principle, holding evacuations as pernicious, and tending to increase that state of debility which gave a dangerous tendency to the complaint, he endeavoured to support the strength of the patient by means of tonic and cordial medicines, and a nutritious diet. With this view, he had recourse to Peruvian bark in substance, and in as large doses as the stomach would bear : wine was given freely, either by itself, or mixed with water, sago, or gruel. In general, an ounce of the bark, and about a bottle of wine, was as much as the patient could conveniently take in one day. But if it was productive of relief from sickness, faintness, or other symptoms, the dose was never stinted, but proportioned to the recurrence of faintness, and other symptoms of debility.

If diarrhœa occurred, that evacuation was checked by the *Confectio Japonica* ; for while he considered looseness as a morbid and dangerous symptom, he viewed a costive habit as being a favourable occurrence. Indeed he seems to be much less anxious than most practitioners, to obtain a regular discharge by the belly. He tells us, that he has frequently seen patients three or four days without a stool, and  
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no bad consequences ensue. That no bad consequences were obvious, may indeed be true. But can we from thence infer, that none took place? Might not the same observations which Dr Campbell has here applied to a bound belly, be applied also to want of cleanliness? Dr Campbell must, we are persuaded, have met with many instances, where, though there was a very great neglect of cleanliness, yet it might be said that no bad consequence ensued. Notwithstanding this, however, Dr Campbell has, as we think, with the greatest propriety strongly recommended attention to cleanliness in all its varieties. From this circumstance, we should naturally have inferred that he would have been anxious to prevent the retention of filth in the intestinal canal: For surely no more is to be dreaded from the evacuation of highly putrid feculent matter from the intestinal canal, than from the removal of filth from the surface. The one is as little an evacuation from the system as the other. And, in our opinion, he who enforces the practice of cleanliness in all its varieties, will not allow a load of highly putrid matter to be retained for several successive days in the rectum. We think this observation the  
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rather necessary, because Dr Campbell, in the summary view which he gives of his practice in the end of this chapter, is entirely silent with regard to any direction for obtaining a regular discharge by the belly; and because there are some who are bold enough to assert that no bad consequence arises, though the patient have no stool for eight, or even ten days successively. An event which will more readily take place, if an opiate be given every night, and no practices employed to obviate costiveness.

When the pain of the head increased and became troublesome, Dr Campbell tells us he has often seen it relieved by rubbing the forehead, temples, &c. with a mixture of camphorated spirit of wine, and vitriolic æther. But if no relief was obtained by this, and a tendency to delirium appeared, he found the application of blisters often of service in moderating or removing these symptoms.

This course, Dr Campbell assures us, was attended with most evident service when the symptoms were moderate; and the delirium, if any occurred, was rather of the mild, low, and muttering kind, in opposition to a restless uneasy state, attended with quicker motions; when the

the tongue was moist and furred, or aphthæ appeared in opposition to a hard or dry tongue; when there were petechiæ, or hæmorrhages, and when the marks which characterize debility were particularly striking. But in the progress of the disease, this plan of cure appeared inadequate to the removal of a particular set of symptoms, which frequently appeared. This set of symptoms he describes in the following manner.

After the symptoms of the first attack, such as lassitude, shivering, pains in the back, limbs, and head, the patient takes his bed; his nights are passed without sleep; or if he falls into a short slumber, he awakes disturbed by some unpleasant dream; he starts up, and wants to get out of bed; he is continually turning and changing his posture; complains of pain and confusion in his head; of noise in his ears, and thirst. His tongue is either dry, and hard, or covered with a thick disagreeable furr; his eyes begin to grow muddy, and assume a dull look; his pulse is about 120 strokes in a minute, and small; the skin dry, or bedewed with partial sweats, which produce no alteration of the complaints. These symptoms continue and grow more alarming; uneasy days are succeeded

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ed by restless nights ; the patient is exhausted by pains, and by watching ; the inclination and ability to take nourishment diminishes ; the delirium, which for a while only took place on coming out of his slumbers, is more constant ; and if some means cannot be found to interrupt the progress of the disease, slight convulsions, total refusal of food, and insensibility, are certain to ensue ; which, with cold extremities, and involuntary evacuations, close the scene.

In this state, Dr Campbell, having frequently seen all the usual practices exhausted without success, had recourse to opium. And he tells us, that, after trial, he can venture to recommend it as a most valuable medicine, where the brain is so much affected that delirium actually exists ; but particularly for removing, or at least greatly relieving that restless and uneasy state which is so apt to exhaust the patient with thirst, pain, and watching, and to terminate in delirium : in short, for mitigating those symptoms which give a violent form, and dangerous tendency to the disease.

When Dr Cambell began this practice, he was anxious to see what authorities could be brought in support of it, and in what doses it had



had been given in fevers, strictly so called. Accordingly he here presents us with the sentiments of Sydenham, Doleus, Boerhaave, Van Swieten, Lind, and Cullen, on the use of opium in proper fever. To these authorities Dr Campbell might, we think, with great propriety have added that of the late Dr Gilchrist of Dumfries. For he not only strongly recommends opiates in the circumstances mentioned by Dr Campbell, but also coincides with his sentiments in advising their being given early in the disease. In proof of this, we shall here quote his own words, from his observations on the low nervous fever, published in the Edinburgh medical essays about forty years ago.

“ When the disease seizes with greater signs of acuteness or inflammation, as vomiting, looseness, heat, thirst, sighing, and strong depression (as this hurry of seeming inflammatory symptoms is more or less, so will the faintness and anxiety be.) When this is the case, I say, a gentle opiate, given in some refreshing julep, will have a happy effect to allay these overbearing symptoms. These symptoms then happen only the first days ; for by the time the patient is delirious they are pretty much gone, and he  
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is not sensible of them. This is the proper time to try opiates, lest by the urgency of such symptoms greater be brought on. A prudent use of them might hinder a delirium from coming so soon as would otherwise happen. This would be no small advantage, for the patient's life depends upon the delirium coming sooner or later. When the seizure is with moderate symptoms, there is little occasion for them till the disease be farther advanced, and a delirium comes on with watching, raving, and a dreadful train of nervous spasmodic symptoms, which will not be commanded by a less powerful remedy than opium \*."

We have the rather made this quotation from Dr Gilchrist's Essay, because, ever since its publication, both wine and opium, so strongly recommended by him, have been very frequently used in typhus fever, by many of the first practitioners at this place. While the former is employed as the best cordial for counteracting the *anxietas febrilis*, and supporting the *vis vitæ*, recourse is had to the latter in every stage of fever, whenever it becomes necessary to procure sleep, to mitigate pain, to restrain

\* Edinburgh Medical Essays. Vol. IV. P. 321.

restrain looseness, or to allay convulsive agitations.

These practitioners do not indeed, like some others, expect from opium a total annihilation of the disease. This is an effect they have not observed to result from it, and in this their sentiments precisely coincide with those of Dr Campbell. He observes, that the effects of opiates were sometimes, indeed, a remarkable cessation of the febrile symptoms, but in general, that no considerable alteration in the pulse was occasioned by them ; but rather a mitigation of those more violent affections, which threatened to bring on delirium, or to exhaust the patient by pain, sickness, or watching ; that they seemed to keep the disorder within bounds, and induce it to go through its stages in a more mild and less dangerous form.

Nothing, Dr Campbell tells us, could be more striking, than the contrast which might be perceived in a morning between two patients in similar situations, one of whom had taken the opiate the preceding night, and the other had not. The same observation, says he, might also be made upon a patient who by any accident had omitted the opiate in the evening,  
after



after having taken it a few preceding nights. In the one case, you would hear that the night had been passed quietly and easily, and find the patient in the morning refreshed by the rest he had obtained, and with few complaints. In the other, that he had been restless, disturbed, and uneasy, with a continuance or aggravation of all the disagreeable symptoms.

That the representation here given by Dr Campbell will often hold, we are very far from denying ; and in practice we have often observed the same thing. But from repeated experience we may venture to assert, that he who expects it will hold uniformly or invariably, will find himself egregiously mistaken. We have met with many instances of patients labouring under fever, who, as long as they took opiates at bed-time, passed the night in a restless and uneasy state, but upon the opiate being omitted had a quiet and easy night. And we need hardly remark, that there are some peculiar constitutions where opium, whatever be the form or dose under which it is exhibited, never fails to produce an uneasy sense of heat, a distressing thirst, and a disagreeable confusion of head, approaching to delirium. These circumstances,

ces, particularly the delirium, are augmented in proportion to the quantity taken; and with some it is only by exhibiting it, either in small doses combined with acid, or under the form of watery extract, that we can obtain from it the sedative effect of inducing a quiet sleep.

After Dr Campbell's general observations on opium, he next speaks of the dose, and manner of exhibiting this medicine. Opium, he justly observes, requires the same precautions, in its use, with all other medicines possessing particularly active qualities; for whilst in too small quantity the desired effects are not produced, so in an over dose it may be converted into a poison. To excite a just degree of caution, he points out those remarkable varieties, with respect to the quantity of this medicine, which may be borne with impunity from habit, from disease, or from other causes. From these circumstances, quantities almost incredible, when we consider the influence which it in general has, may be taken without inconvenience. Upon the authority of a practitioner of unquestionable veracity, we have been informed of a lady in Edinburgh, who, for a considerable time before her death, took li-

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quid laudanum to the extent of twelve ounces in the course of twenty-four hours. Dr Campbell, fully aware of instances of this nature, points out, however, the very great danger of trusting to them, and mentions several cases, some of which fell under his own observation, where doses, which could not be esteemed very large, terminated in death. He gives a particular relation of one case, of a robust man, where eighty drops of liquid laudanum, repeated four times at the distance of an hour between each dose, proved fatal; although in all it contained only thirteen grains of solid opium, and although that quantity had before been taken in a solid form without any bad effect. In another case, two drams of liquid laudanum, which was intended to be taken in a few drops every night at bed-time, to allay a tickling cough, being by mistake exhibited at once, produced comatose symptoms, which terminated fatally in twenty-four hours, tho' at a moderate computation the whole of this quantity could not exceed 200 drops.

With these considerations in his mind, Dr Campbell began to exhibit opium. As it is when conjoined to camphire, so efficacious in producing a determination to the skin; and as

this



this medicine has been considered as useful in these fevers, he at first gave it in the following formula :

R. Opii pur. gr. i. ad griss.

Camphoræ gr. x. ad gr. xv. f. bol. hora  
decubitus fumendus.

This dose was attended with all the wished-for effects, when the disease was mild, and in its early stages ; but where the symptoms were violent, it was not adequate to the purpose. The formula which he then used was as follows :

R. Tinct. Theb. guttas lx.

Julep e Camphora unc. iss. M.

This was sometimes given with the addition of thirty or forty drops of antimonial wine, especially when the tongue was dry and hard, or the thirst considerable. Of this mixture, the patient was directed to take two thirds in the evening, and the remainder at the end of two hours, if sleep, or at least rest did not ensue. And he even sometimes found it necessary to give twenty or thirty drops more of tinctura thebaica at the end of other two hours. For he remarks, that unless the sedative effects of the opium be produced, he never saw any good

consequence from the medicine. In cases of children, the dose was diminished in proportion to their respective ages. But in general, he gave from 20 to 25 drops to those that were from twelve to fourteen years of age. He was sometimes obliged to repeat the dose in the morning. But in most instances, he tells us, that the truce obtained by the opiate given in the evening made the succeeding day pass on tolerably easily.

Dr Campbell concludes this chapter with some remarks on the practices which he employed for obviating anomalous symptoms. Convulsive twitchings of the arms generally disappeared from the use of musk and camphire. But this being an expensive medicine for the poor, it was found that the same effect was obtained from a mixture of the *tinctura foetida*, and *spiritus volatilis aromaticus*. When pains attacked the sides, affecting respiration, recourse was had to a blister. Hæmorrhages from the nose were most effectually checked by dosils of lint moistened in vinegar, and then rolled in powder of allum, thrust up the nostrils.

After this account of the practice which he  
succeeds.



successfully employed, our author, in the fifth, and last chapter, offers some conjectures on the proximate cause of the disease. Here, after some very judicious remarks on the fleeting and visionary nature of medical theories, and on the prejudicial consequences even, which have frequently resulted from them, he proposes his own conjectures with great diffidence. He thinks, that the remote causes induce a state of debility in the system; and that while the deliberating power influences the whole system, the vessels of the brain are, from the peculiar laxity of their fibres, apt to be affected with a greater proportional loss of tone than happens in other parts of the body; and hence become distended with an unusual quantity of fluids, which, from their increased bulk, and subsequent effusions and suppurations, occasion headach, irritation, delirium, and death.

He admits, however, that there seems to be something in the effect of contagion, and the other causes which produce this fever, superadded to that debility which so evidently occurs, and the obviating of which is at present the great object of our practice; because, if it acted merely by producing a certain degree



of debility in the system, it would naturally follow, that whenever debility was induced to that particular degree, by any means, the disease in question in one state or other would ensue. This, however, is not the case ; and besides, upon this principle, recovery, he observes, would be impossible, as no degree of debility can be more extreme than that which was sometimes seen when the fever left the patient, and yet nothing that could be denominated disease then existed. It is, he thinks, probable, that the volatile something which issues from the diseased bodies, or infected clothes, and whatever else gives rise to this fever, is absorbed into the system, where it continues to act on the irritable and muscular fibres, by destroying their tone, and perhaps circulates with the fluids during the course of the disease ; but that it is of too subtile a nature to be the object of our senses, much less at present of our practice, otherwise than in tracing or obviating its effects.

Of this theory we do not consider it as our province to offer any opinion. We must, however, candidly acknowledge, that we have yet  
met

met with no theory of fever which does not to us appear both inadequate to the explanation of the phænomena of the disease, and liable to unfurmountable objections. But while we view Dr Campbell's theory in this light, we are of opinion that the directions which he has given with respect to the practice may often be followed with advantage and success. And he is justly intitled to praise, for having presented the public with the result of extensive and accurate observation.]

## XIV.

*Clinical Observations on the use of Opium in Low Fevers, and in the Synochus, illustrated by cases; with some previous remarks on the Epidemic Fever which prevailed at Oxford and in the neighbouring counties. In a letter to John Badeley, M. D. Physician at Chelmsford, Essex. By Martin Wall, M. D. Lord Litchfield's Clinical Professor, one of the Physicians to the Radcliffe Infirmary, and late Fellow of New College. 8vo. Oxford.*

AFTER having said so much respecting the use of opium in the last article, it will not now be necessary to be very minute in our analysis of the present treatise. But as the proper treatment of fevers is unquestionably a subject of the utmost importance in medicine, and as we are here furnished with the faithful result of observations made in actual practice by an attentive and discerning physician, we trust that a short view of them will not be unacceptable to



to our readers, especially as Dr Wall not only recommends opium in the low fever, or typhus, but also extends its use to the synochus, or that fever at the commencement of which there are evident marks of the inflammatory tendency. And we must own, that we cannot help adopting his opinion \*, that the aphorism "*opium non quadrat genio inflammationis,*" has been extended much too far to the exclusion of this valuable medicine, where it might be employed with very great advantage; and which, indeed, is of such importance in the practice of medicine, that, to use the words of Dr Sydenham, we may with truth say, "*Sine illo, manca sit et claudicet medicina.*"

The observations with which we are here presented by Dr Wall are, the reader may naturally infer from the title, communicated to the public under the form of a letter to his intimate friend Dr Badeley. But they consist principally of a distinct and minute relation of seventeen

\* On this occasion, we beg leave to recall the attention of our readers to a very excellent paper, by Dr Hamilton of Lynn Regis, published in the Ninth Volume of the First Decade of our Commentaries.

venteen different cases, which Dr Wall treated in the course of his practice. And though this mode be indeed liable to the charge of prolixity, yet it has also its advantages; among others, that of enabling the reader to judge for himself is not the least considerable. And we must here remark, that notwithstanding a high deference for Dr Wall's judgment, we cannot altogether agree with him in the conclusions which he has drawn on some occasions from the cases here related.

To the cases themselves, Dr Wall has prefixed a general account of the epidemic fever which prevailed in Oxford and its neighbourhood in 1785-6, the period during which all the cases afterwards described occurred. But the particulars of this description do not admit of abridgement; and indeed that is hardly necessary, since, as he himself very justly observes, it had much analogy with the slow nervous fever described by Dr Huxam, and many other writers.

Though the occasional cause of this fever was not always easily traced, yet Dr Wall was inclined to think, that, in every instance, it was to be ascribed to contagious miasmata. And  
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he has seen, he tells us, many instances of the truth of the remark made by Dr John Hunter, Dr Rush, Dr Blane, and others, that the influence of this contagion is sometimes increased in the winter, by the confinement of the effluvia of diseased animal bodies. He offers the following conjecture, respecting the influence of cold, particularly when conjoined with moisture. The contagious effluvia exhaled from their sources are, he tells us, suspended round the place or body which supplied them, like an atmosphere, by a sort of solution in a watery vapour. An animal body, immersed in, or exposed more partially to the contact of this infectious atmosphere, is liable to absorb these noxious particles by the skin, by the lungs, or by the stomach; by one or more of these inlets into the system, and possibly by all of them. If no particular cause of constriction or restraint acts upon the excretory organs, these infectious particles are probably again discharged harmlessly into the air, with the excrementitious or useless fluids. But if the excretories become constricted, while these particles are accumulated in the system, they are then allowed time to ferment and disseminate them-



themselves, to exert their malignant qualities, and to convert the fluids of the body into their nature. Whether there be any truth in this explanation or not, it is at least certain, that the typhus fever is as frequent, and as dangerous an occurrence, during the winter, as it is during the summer months. And all the cases which our author has here related, happened between the end of October and the beginning of March.

To this account of the epidemic at Oxford, Dr Wall subjoins some observations on the fynochus of nosologists, or that fever in which inflammatory and typhorid symptoms are conjoined. This, which begins with slight inflammatory symptoms, and soon ends in the debility of typhus, he considers as the most common form of continued fever in this country. He thinks, that in most cases it originates from contagion, the operation of which is at first disguised and modified, by a slight degree of inflammatory diathesis; either previously existing in the system of individuals attacked by the disease, or induced by the concurrence of certain occasional causes, particularly cold, co-operating at its accession with the contagious effluvia.

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In the epidemic which occurred at Oxford, during the period we have mentioned, and in which there were many instances both of typhus and synochus, Dr Wall soon saw that bad effects resulted, both from considerable evacuations, either by the lancet, or by purgatives, and also from nitrous medicines, and other saline neutrals. The same effect seems also followed from James's powder, and other antimonials, while the Peruvian bark, cordials, and antiseptics, appeared to have merely supported the strength of the patient, and given an opportunity to the *vis medicatrix naturæ* to exert its salutary influence.

Finding this to be the case, from the observations of Dr Campbell and others respecting the benefits derived from opium, and from the analogy of its use in intermittent fevers, [where he observes that it has an almost specific effect, in calming the agitation of the spirits, in moderating heat, in abating the quickness of the pulse, relieving the pain and headach, inducing calm refreshing sleep, and shortening the paroxysm when it is given at the accession of the hot fit, he was led to have recourse to the use of this medicine. And the cases here related



related are intended to point out the propriety of this practice.

The first patient whose case is described had been blooded and purged in the beginning of his complaint. About the tenth day of his disease recourse was had to draughts, containing xv drops of *tinctura thebaica*, and xxv of the liquor *Anodynus Hoffmanni*. This produced some alleviation of his symptoms. But the opiate being omitted for two days, he became much more restless, and shewed greater symptoms of debility, which, however, went off on the repetition of the opiate. By slow degrees he recovered his health and strength; but he continued, we are told, near four weeks in very considerable danger.

In the second case, after an emetic, a blister, and James's powder, and after the disease had continued, as we may presume, for eight or ten days, in conjunction with five grains of James's powder, and fifteen of the *confectio cardiaca*, the patient got half a grain of the thebaic extract. This dose was administered every sixth hour, and a draught with camphorated julep, spirit of Mindererus, and Hoffman's anodyne liquor interposed. Upon this, though the state of  
the



the intellect, the appetite, thirst, &c. continued nearly as before, yet the pulse became more moderate, there was more disposition to sleep, and the urine let fall a good sediment. These favourable appearances, Dr Wall tells us, he could not but impute to the operation of the opiate. With the continuance of the opiate he had afterwards recourse to blisters, to essence of antimony, to Peruvian bark, Virginian serpentaria, and some other medicine. The patient gradually recovered his health, but was confined to bed little less than four weeks. Nearly the same event took place in the third and fourth cases, viz. a recovery after a tedious illness.

In the fifth case, after the previous use of tartar emetic, infusion of senna, Dover's powder, James's powder, essence of antimony, vitriolic æther, &c. recourse was had to an opiate on the tenth day of the patient's disease. But for two days the pulse continued very quick and very feeble, so that sometimes it could hardly be felt, notwithstanding the use of *confectio cardiaca*, tincture of serpentaria, and fomentation of the lower extremities. But on the thirteenth, after the application of a blis-

ter the back, with the continuance of the tinctura thebaica, the pulse became more strong, and less quick, with a considerable remission of the other symptoms. After this, she continued gradually to recover, and was so well, by the twenty-fifth day of her disease, that Dr Wall discontinued his attendance.

The sixth case, though in other respects very similar, was more tedious; the patient being attacked on the 12th of December, and not well enough to be discharged till the middle of February.

From these cases, Dr Wall was not only convinced of the efficacy of the opiate, but was also inclined to suspect that this efficacy was restrained by the antimonials which were employed in conjunction with it. He therefore determined to give it a fair trial without the antimonial. And this opinion, he thinks, was established by the five cases which follow. These cases are indeed considerably shorter than the preceding ones. But to us we must acknowledge it does not appear by any means proved in a satisfactory manner, that this was effected by means of the opiates. And it is to be observed, that in two of them, viz. the seventh



venth and tenth, antimonials were used, James's powder being given in the one, and emetic tartar in the other. We need hardly observe, that fevers, treated in precisely the same manner, will be very various in their duration, when no good reason can be assigned for the difference. But as Dr Wall considers the last of these five cases, viz. the eleventh, as affording the most full and satisfactory evidence of the efficacy of the practice inculcated; we shall here present it to our readers in his own words:

Mr B—, a gentleman of the Faculty, distinguished by his abilities, industry, and diligence, was attacked with febrile symptoms on the 21st of January 1786. As he had been obliged to sleep in a cold room, rendered very damp by the melting of snow; his friends imputed his disorder to the influence of cold only. But with more sagacity, and probably with more truth, Mr B— was disposed to attribute it to contagion. He allowed, that the cold might have co-operated as an occasional exciting cause. When I first saw him, says Dr Wall, about seven in the evening, on the 22d of January, I could not but adopt his idea of his situation, especially as I knew that his active



and regular attendance, in several places where contagious effluvia constantly abounded, exposed him every day to their noxious influence. He complained of violent pain in the head, the loins, and all over the limbs. He had no disposition to sleep. His tongue was dry and white. His skin very hot. His eyes tender and watery. His pulse about 130, and extremely feeble.

As I had formerly had much conversation with this gentleman, concerning the use of opium and ætherial fluids in fevers, I was not surprised to find him very solicitous to try their efficacy in his own case. From a conviction of the propriety of their use, I ordered him immediately *Æther. vitriol. Tinct. theb. aa gt. xxx* in a little mint water. My attention being much excited and engaged by this case, I saw my patient about one in the morning, and found him much more composed. He had had a little sleep. His pains were mitigated. His pulse was about 120, and much more strong. His skin less hot and more open. I gave him myself another draught with *æther. gt. xxx. tinct. theb. gt. xx.*

January 23. His pulse was reduced to 100.

He

He had slept a good deal, and found himself relieved. His urine deposited a good sediment. He was ordered during the day to take a saline draught, with æther. Spt. vol. aromat. & Tinct. serpent. every fourth hour.

In the evening, his pulse was reduced to 84, and had, every eighth or ninth stroke, an intermission. I will not pretend to point out the particular circumstance to which this symptom should be ascribed. Some may impute it to the medicines employed. It was more probably owing to the natural constitution of the patient. As the body was disposed to be costive, an emollient glyster was injected, and, after its operation, a draught given, with xl drops of æther, xxv of tinct. theb. and xv of spt. vol. aromat.

January 24. He had a very good night. All the febrile symptoms being now removed, and the urine depositing a good sediment, he was ordered the bark four times a-day.

On the 26th, he was well enough to walk out, and on the succeeding day began to return to his occupations.

We must own, that this case does not appear to us to afford that satisfactory testimony



of the efficacy of opium which Dr Wall is disposed to imagine. Supposing this to have been decidedly an example of a contagious fever, is it at all uncommon to find instances of that disease, where infection alone could be suspected to operate as the cause, running their course in a similar manner, and in as short a period, though neither opium, æther, volatile alkali, aromatic oils, serpentaria, bark, nor indeed any other medicine was employed?

It will not, we presume, be disagreeable to our readers, that we here mention a more simple, and not less successful mode of treating infectious fevers than is commonly adopted, and which was lately put in practice at this place. One of the children belonging to the Orphan Hospital at Edinburgh, happening to visit a relation ill of a fever, was soon after affected with the same disease. The progress of the contagion, thus introduced into the hospital, was so rapid, that in the space of a few weeks, notwithstanding many precautions to prevent it from spreading, of 130 children, contained in the hospital, 85 were seized with it. With regard to medical treatment, they were under the care of a very able and ingenious practi-



practitioner, Mr Kerr, surgeon at this place. Most of them had an emetic as soon as any symptoms of the disease appeared. During the course of it, the strictest attention was paid to cleanliness in all its varieties; the belly was kept regularly open by simple laxative injections; diluents were employed copiously, and sometimes acidulated, while the apartments of the sick were freely and almost constantly ventilated. Under this general treatment, though with some of them, the symptoms were alarming, the disease being, at a very early period of its progress, attended with petechiæ, vibices, and hæmorrhages; yet there was not one death, and in most of them the fever was not only extremely mild, but also of short duration, finishing its course within the space of seven or eight days. In not one of these cases was a single grain of opium employed. Besides the children, the matron of the hospital, and three nurses, also caught the disease; all of whom likewise recovered. The case of the matron in particular was very remarkable. As soon as she felt that sense of cold which preceded the other symptoms, she immediately took one of those emetics which had been deposited in her

hands by Mr Kerr, to be given to the children on the first appearance of the disease. This vomit operated well, and without taking any thing else that could be called a medicine, on the fifth day from the commencement of her disease she was again able to discharge the duties of her office. From this, as well as from many other instances, we own we are apt to infer, that, in the treatment of fevers, practitioners are as often apt to err, by doing too much, as by doing too little.

We mean not, however, from this to insinuate, that opium is not frequently of very great benefit in fevers. Symptoms often occur, which will not yield to a less powerful medicine. And a quiet night may often have very great influence in giving an opportunity to the system, or, to use the words of Dr Wall, to the *vis medicatrix naturæ* to exert its salutary power. But excepting in this way, we must own, that neither our own experience, nor a careful perusal of the cases contained in this volume, would lead us to adopt the conclusion of Dr Wall, who asserts, that in the low nervous fever, so frequently prevalent among the poor, he can  
safely



safely give his testimony, both as to its power in curing and in shortening the complaint.

After the cases of simple fever, Dr Wall next relates some in which there was reason to believe that the fever was complicated with some topical affection, by which, however, he was not prevented from using the opiate, and where the success justified the practice. And he concludes with the history of three cases, in which opium was employed, and where the disease terminated fatally. But notwithstanding this, from the evident effects which followed from the use of the medicine, it did not, as he justly observes, lose any part of its credit by its unsuccessful administration.

To these cases of unfavourable event, where opium was employed, he tells us, he could have added others, wherein he has given it without any decided effect. He has employed it several times in angina maligna, but has not been able to draw any positive inference concerning its efficacy in that form of putrid fever. He has given it in one or two desperate cases, and could not observe that it either expedited or retarded the fatal event. He has given it in others, where the patient has recovered, but



he could not presume to ascribe the recovery to the efficacy of the opium.

Upon the whole, though we have upon some occasions expressed our doubts with regard to the conclusions which Dr Wall has drawn from some cases, and in others, judging from our own experience, are led to form a different opinion from that which he seems to have adopted ; yet we look upon his treatise as conveying useful information, and we hope that it will have the effect of inducing practitioners, not to deprive their patients, from any idle theories, of that alleviation of symptoms which opium in different modifications of fever is capable of procuring.

## XV.

*An Inquiry how to prevent the Small Pox, and Proceedings of a Society for promoting general Inoculation at stated periods, and preventing the natural Small Pox in Chester. By John Haygarth, M. B. F. R. S. 8vo. Chester.*

FROM this publication, it appears that Dr Haygarth has bestowed uncommon pains in forming a Society at Chester for the benevolent and humane purpose of preventing the natural small pox. This distemper had, in Chester, been particularly fatal to the rising generation before the establishment of that Society; but since that time, from the assiduous care and attention of the members, and from the salutary regulations laid down, its ravages have been much lessened, and in a great measure prevented. This circumstance should certainly have the effect of leading to similar establishments in other places. And although these  
might

might not be productive of all the same good consequences as at Chester, yet they would unquestionably be attended with some benefit. This, however, as well as the plan on which it may best be obtained, will more fully appear from a particular consideration of this treatise.

The learned and ingenious author sets out, by endeavouring to establish certain propositions, which are the basis of the future regulations :

1. The small pox, says he, are an infectious distemper.

This proposition is so clearly established by the practice of inoculation, that it is unnecessary to bring other facts in support of it.

2. The small pox was never known, since its original commencement, to be produced by any other cause than infection.

This he endeavours to prove, from the following facts. The world, he observes, had existed between four and five thousand years before history takes any notice of the distemper ; it was originally endemic in or near Arabia, from whence all the known parts of the world received the infection. It did not appear in Greenland till 1733, being received by a native



five who caught it at Copenhagen. In Minorca it entirely disappeared from 1715 till 1742; that is for seventeen years. It was then again introduced by a British ship of war. In Boston in New England, it has been epidemical only eight times since the first settlement of the province of Massachusetts; and every one of those times it was evidently imported from foreign parts. At Rhode Island, it was never epidemical, owing to the means which have been taken to prevent it from spreading when introduced.

3. The variolous poison is soluble in the air.

The mode of combination between the variolous poison and the air, he apprehends to be by solution. This appears from there being no diminution of transparency. But still that the atmosphere is frequently impregnated with it, is evident from the disagreeable smell perceptible in the chamber of a patient labouring under the small pox. But though the variolous matter be strictly soluble in the air, the atmosphere may be so supersaturated, that a portion of the variolous matter may be undissolved, and fit to impregnate a new portion of air. Hence  
variolous

variola matter is kept for years, when it is received on cotton, and put into a close-corked phial, the quantity of air in the phial not being sufficient to dissolve it.

4. If two persons be exposed, for the first time, to the variolous infection, they very rarely both escape catching the small pox; and if three persons be exposed together, they much more rarely all remain uninfected.

It has been estimated, by authors of high authority, that the proportion of mankind incapable of infection is not above one in twenty. Hence, from calculation, it appears, that it is eight thousand to one if three in a family escape when exposed to infection.

5. The period between the infection and the commencement of the variolous fever is generally from the 6th to the 14th day, inclusive, after inoculation, and this period is not much longer in the natural small-pox.

This appears, not only from the result of Dr Haygarth's own observations, and he has given several cases in support of it, but also from those of Baron Dimsdale, and the late Dr Monro.

6. Persons liable to the small pox are infected by breathing the air impregnated with the  
variola



variolous miasmes, either very near a patient in the distemper, from about the time that the eruption has appeared till the last scab is dropt off the body ; or very near the variolous poison in a recent state, or that has been close shut up ever since it was recent.

Of these, while he thinks there can be very little doubt, he at the same time brings some facts very much in point to demonstrate them.

7. Clothes, furniture, food, &c. exposed to the variolous miasmes, never or very rarely become infectious.

Though the contrary of his proposition has been generally received, yet both from the theory of chemical solution, from the analogy of other vapours, and from facts, he is inclined to reject the common opinion ; and he contends, that the variolous poison, in the form of serum, pus, or scab, by impregnating the air near it, is the sole means of infection.

If this opinion be well founded, he contends, that the difficulty of prevention is less than on the former supposition, beyond all comparison. The poison in this form may be seen and easily destroyed. One visitor in 10 or 20, may possibly convey, out of an infectious room, some of  
the



the variolous matter capable of doing mischief. It may accidentally adhere to some part of his clothes or person. But cleanliness alone would be fully sufficient to prevent the communication of the infection, excepting by personal intercourse with the patient. If this conclusion be admitted, may not the variolous poison, says he, be prevented from injuring mankind, with as much ease and certainty, as arsenic, laurel, or any other poison.

8. The air is rendered infectious but to a little distance from the variolous poison.

The small pox have, in general, been supposed to infect the air of a place to a considerable distance. Hence the danger is acquiesced in as inevitable. This opinion, Dr Haygarth thinks, suggests fear where there is perfect safety, and prevents caution where there is the greatest danger. Hence he is here at particular pains in stating the train of arguments which first suggested doubts concerning the truth of this opinion, and afterwards the facts which seem to prove that the opinion is utterly false. From the facts which he states, it is very clear that the variolous poison is never propagated to any considerable distance, and that when existing in a house it is not infectious to any person out of it,

it, even although the doors and windows of the house be open. He concludes, that in a room there is the greatest danger where the infectious poison is placed between the person liable to infection and the open air.

9. The small pox may be prevented, by keeping persons liable to the distemper from approaching within the infectious distance of the variolous poison.

This follows as a necessary consequence of the truth of the former propositions.

After having thus considered how the small pox may be prevented as a medical question, he next considers in what manner this might be capable of a practicable application.

He thinks that the prevention of small pox may be effected by observing the following rules:

1. Suffer no person, who has not had the small pox, to come into the infectious house. No visitor, who has any communication with persons liable to the distemper, should touch or sit down on any thing infectious.

2. No patient, after the pox have appeared, must be suffered to go into the street, or other frequented place.

3. The utmost attention to cleanliness is absolutely



folutely neceffary. During, and after the diftemper, no perfon, clothes, food, furniture, dog, cat, money, medicines, or any other thing that is known or fufpected to be bedaubed with matter, fpittle, or other infectious difcharges of the patient, fhould go out of the houfe till they be washed, and till they have been fufficiently expofed to frefh air. No foul linens, or any thing elfe that can retain the poifon, fhould be folded up and put into drawers, boxes, or be otherwife fhut up from the air; but immediately thrown into water, and kept there till washed. No attendants fhould touch what is to go into another family, till their hands be washed. When a patient dies of the fmall pox, particular care fhould be taken, that nothing infectious be taken out of the houfe, fo as to do mifchief.

4. The patient muft not be allowed to approach any perfon liable to the diftemper, till every fcab is dropt off, till all the clothes, furniture, food, and all other things touched by the patient during the diftemper, till the floor of the chamber, and till his hair, face, and hands have been carefully washed. After every thing has been made perfectly clean, the doors, windows,



dows, drawers, boxes, and all other places that can retain infectious air, should be kept open till it be cleared out of the house.

To induce the poor to observe these regulations, he proposes that a small pecuniary reward should be given to those who accurately observe them ; and he has little doubt that independent and intelligent citizens will be induced to observe them from motives of humanity. But in order to ascertain with what degree of accuracy and fidelity the rules of prevention are observed, he thinks it necessary that an inspector should be appointed, whose office it would be to obtain information as soon as possible after the small pox had appeared in a family, to give them the rules, to visit them frequently, and to keep an exact register on a plan which may include every necessary information that can be required to investigate the progress of the distemper through a town.

To demonstrate that the rules here proposed are not theoretical and impracticable, Dr Haygarth subjoins to his inquiry, an account of the proceedings of a Society for promoting inoculation, and preventing the natural small pox, in Chester. We are here presented with many

detached papers of different dates ; such as an advertisement soliciting a general meeting of the inhabitants to consider this subject ; the resolutions of that meeting ; the plan proposed for a general inoculation ; the proposed regulation for preventing the propagation of the natural small pox ; different paragraphs in the newspapers respecting the Society ; different addresses to the inhabitants of Chester ; and reports from the Society itself at different times. From these, it appears that the observance of the rules proposed had repeatedly extinguished the natural small pox in Chester, while from their general inoculations in 1780 and 84, four hundred and sixteen children had the disease, of whom two only died after it ; and in both cases it was very doubtful whether the death was the consequence of the operation.

After stating this evidence in favour of the doctrines contained in this inquiry, Dr Haygarth concludes it with an address to the medical reader. In this address, he submits it to their deliberate consideration, as a question which it is peculiarly their duty to determine, whether it be not medically possible to prevent the small pox ? He is decidedly of opinion, that  
this



this might be effected. And, to correct the pernicious errors that universally pervade the kingdom, he contends, that no means could possibly prove so effectual, as the establishment of small-pox societies to stop the ravages of this dreadful pestilence. He entertains strong hopes, that medical gentlemen may form such associations on benevolent and disinterested principles. It is from being strongly impressed with the opinion, that the most important advantages may result to our country, and to mankind, from a medical combination to check the ravages of this destructive pestilence, that Dr Haygarth has taken the liberty of addressing the gentlemen of the profession most distinguished for their knowledge and liberal sentiments. From the degree of success with which the regulations to prevent the small pox have been executed at Chester, though generally opposed by the most untoward prejudices, he has no doubt that the natural distemper might be in a great measure excluded from any district whose inhabitants would willingly and gladly accept of inoculation.

Of the justice of this reasoning, and of the salutary consequences that would result from



general inoculation at stated periods, there cannot, we apprehend, remain even a shadow of doubt. It must certainly give a very high degree of satisfaction to Dr Haygarth, to observe, that institutions for this salutary purpose have of late been established in several different towns; and that general inoculations have been successfully executed at Liverpool, Leeds, Whitehaven, and some other places. We are, however, sorry to observe, that this laudable example has by no means been followed so generally as ought to have been the case. And in some places where attempts have been made, the most assiduous exertions of some of the medical faculty have proved altogether abortive. Among other places, this has been the case at Edinburgh. In this city, from the manner in which many of the lower class of people live, the prevention of the communication of the natural small pox is altogether impossible. And although among the higher ranks inoculation is now become almost universal, yet among the vulgar, from ill-grounded prejudices, and even from erroneous religious tenets, it has made but very little progress; notwithstanding the earnest admonitions, and gratuitous assistance

assistance of the medical practitioners. It would be but natural to think, that when the vulgar see daily, such striking examples of the benefit of this practice, they would be disposed, on the death of an infant by the natural small pox, to consider themselves as having tempted Providence, by neglecting the means of saving it which inoculation afforded. This, however, is by no means the case. For while they consider themselves as guilty of no crime when an infant loses its life from inoculation being neglected, they think it highly criminal to induce even a slight temporary disease for the best of purposes.

Happily, however, these prejudices are not universal. For we are informed on good authority, that in some parts of the Highlands of Scotland, where they are almost destitute of medical assistance, inoculation is in very general use, being performed by the mothers by the aid of a needle. Perhaps therefore the period is not far distant when it may extend itself over the whole island. But whether this shall ever be the case or not, the Publick unquestionably is highly indebted to Dr Haygarth, not only for his ingenious observations, and judicious plans, but also for his beneficent exertions.

## XVI.

Ed. Sandifort, *Medicinæ et Chirurgiæ in Academia Batava quæ Leidæ est Professoris Exercitationes Academicæ. Liber Secundus. Quarto. Lugduni Batavorum.*

IT is some years since the learned author favoured the Public with the first volume of this work. And continuing the exertions of his industry and genius, he has now presented them with a second, which contains observations on several different subjects equally curious and interesting. But of these the greater part are anatomical subjects, consisting of descriptions which do not admit of abridgement, and which indeed, although copied at full length, could be but ill understood, without the aid of those elegant and accurate plates which the author has subjoined to this work. It is therefore only of a few of them that we can here propose to give an account. But we shall present  
our



our readers with a general view of the subjects that are treated of in this volume.

1. De mutationibus quas ossa cranii in hydrocephalo subire solent.

2. De craniis præter modum crassis.

3. De singulari ossis frontis ex fungo duræ matris degeneratione.

4. De concretione plenaria cranii, omnium vertebrarum colli, duorumque superiorum dorsi.

5. De maxilla inferiore, in latere dextro, cum cranio firmiter concreta, aliaque simili vitio, in opposito latere, laborante.

6. De cephalopharyngeo musculo alioque supernumerario in cervice viso.

7. De laryngis, asperæ arteriæ, vasorum viscerumque degenerationibus nonnullis.

8. De hepate maximo, ponderosissimo, steatomatoso, in cadavere icterici observato, alioque insignem abscessum recondente.

9. De fistuloso pectoris ulcere.

10. De Hydrope peritonæi.

11. De renis dextri et vesicæ urinariæ notabili ulcere.

12. De ischuria lethali.

13. De artresia ani.

14. De calculis duobus rarioris figuræ.

15. De crure præter modum tumido.

16. De palato molli uvulaque a nativitate fissis, absque ullo alio oris interni vitio.

17. De Forficula viva naribus excussa.

In the eighth chapter of this work, as the reader will observe from the contents, Dr Sandifort treats of a remarkable affection of the liver. Since the jaundice, he observes, depends either upon an obstructed secretion of bile from the blood of the vena portarum, or upon obstruction to its passage into the duodenum, it is by no means wonderful that the chief seat of this disease should be in the liver, and that this viscus should in such instances be found in general more or less in a diseased state. But in the man who is the subject of the following description, such a degeneracy of the liver had taken place as is very rarely observed.

There could be no difficulty, he observes, in determining the disease of which this man, whose body was brought, like many others, to the anatomical theatre, without having before been seen by Dr Sandifort, had died. While his whole body was highly emaciated, it was at the same time of a dark yellow colour, especially in the eyes. His abdomen was swelled, and  
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the right hypochondrium was uncommonly hard. From these circumstances, there could be no doubt that the secretion of bile was impeded, and that a repulsion of it had taken place into the mass of blood. His abdomen seemed to be distended with a considerable quantity of water ; but on the right side there was a very large and hard protuberance. The margin also of the right side of the thorax was more prominent than the left. And that the tumour within arose from a disease in the liver, was evident not only from the touch, but even from inspection. It extended over the whole of the right side of the abdomen.

When the abdomen was opened, it was found to contain a large quantity of yellowish-coloured water. The membranes lining the abdomen, and even the intestines themselves, were also tinged of the same colour. The intestines, however, were pushed out of their natural situation by the liver, the size, hardness, and weight of which were very remarkable. It had extended itself so far through the abdomen, that neither the intestines nor stomach were visible, and these parts placed below it were very much compressed. Its external surface was rendered



rendered very uneven, by several tubercles of a yellow colour, and of different sizes. At the place where the oesophagus usually descends, near the left boundary of the liver, this canal was not only firmly attached to it, but its external parts were also in a highly-diseased, indurated, and almost cartilaginous state. And there was also close to it, an abscess filled with highly foetid matter, penetrating deeply into the substance of the liver.

When it was entirely detached from the other parts, it weighed ten pounds. On the right side, it extended in height eleven inches, and on the left, nine. It was eleven inches in breadth, and five in thickness, from the spine to the ribs. The tubercles were found to be by no means confined to its external surface; many were also obvious in the internal, and they were even discovered in its substance. All these contained a thick yellow matter, not unlike that which is often observed in steatomes. But in some of them it was in a more firm, in others in a more fluid state; and in a few of them there seemed to be some purulent matter. The gall-bladder contained very little bile.

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The membranes of other cavities had also a yellow colour, and indeed this prevailed in almost every part. In the head, nothing was found præternatural. And although the thorax was compressed to an uncommon degree, and had therefore a figure different from what is common, yet nothing remarkable could be observed, unless that on the surface of the anterior ventricle of the heart there was a small suppuration. And the right side of the thorax was particularly small, from the diaphragm rising so high in it.

To this Dr Sandifort subjoins the description of a liver also of a very great size, but from a different cause. In this case, the whole body was emaciated, but there was no symptom of jaundice. Upon opening the abdomen, it appeared extended much beyond the margin of the thorax, and in the right side it was observed to be very thick and red. The gall-bladder scarce contained any bile, but its coats were uncommonly thick and white. The interior and posterior part of the liver, on its concave side, was particularly swelled, and towards the pylorus, and right kidney, there was a large and very tense protuberance.

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The liver, when entirely disengaged from other parts, weighed eight pounds; and at the places most protuberant it not only felt hard, but seemed to contain a fluid. Upon a slight incision being made into it, there flowed out upwards of three pounds of very thick, white, inodorous, purulent matter. The substance of the liver was there only a few lines in thickness, and the whole of the right part was so consumed, that the cavity, after the discharge of pus, would have contained the head of a child. In other parts of the liver there was no collection of pus. But it was remarkable, that every where about the large vessels distributing themselves into the substance of the sound parts of this liver, purulent matter could be discovered. All the other viscera, both in the thorax and abdomen, seemed to be sound. But the pia mater of the cerebrum was uncommonly strong.

To these he adds the description of a third case. A porter, immediately after raising a heavy burden, felt great uneasiness in the region of the loins, by which he was at that time confined to bed for two days. Afterwards, he was so far debilitated, that he could not carry, without inconvenience, a burden even of twenty pounds.



pounds. About a month afterwards, upon turning himself in bed, he thought he heard the agitation of water in his belly, and then that he perceived a body rising from the hypogastric region to the scrobiculus cordis, and stopping there, it gave the beginning to a hard tumour. On the fifth month after carrying the heavy weight, he came to the hospital. At that time there was water in his abdomen, and the tumour could be distinctly felt in the place mentioned, and below the last ribs, particularly on the right side. Upon pressure, it felt a little unequal, but gave no pain. Nor had he any uneasiness, either from its weight, or from its exciting cough. The man's countenance was very pale, and entirely free from yellowness; nor was the slightest yellow tinge to be discovered, even in the white of his eyes. He could freely lye on both sides. He had some difficulty of breathing, but it was not considerable. He, however, in no long time, died of the affection.

Upon examination of his body after death, the following appearances were detected. The cavity of his abdomen contained a great quantity of effused water, which had no bad smell, was pellucid, and verging to the colour of oil  
of

of almonds. The omentum was retracted towards the left side, and was of a brownish green colour. The stomach was very small and contracted. The spleen was twice its natural size. Externally, it was of a whitish cast, and within it had some white parts, but they were not hard. But the liver was still more increased, so that it weighed about fourteen pounds. The whole of it was hard, and it had on its external surface many protuberant spots. These were of a yellow colour, but in other parts it was pale. Internally, excepting at a very few parts, where proper hepatic substance seemed to be intermixed, the whole liver consisted of a substance, which had a white colour, with a yellowish cast, and which when pressed seemed every where to give out a purulent ichor. The gall-bladder was very small.

In these cases we have striking examples of variety in the morbid conditions, to which this viscus is subjected.

In the tenth chapter, Dr Sandifort treats of a dropfy of the peritoneum. Though dropfy, he observes, be a very common disease, yet all its species are not equally frequently observed; nor when present, are they always attended with



with such symptoms, that even the most skilful practitioner may not be doubtful as to the nature of the disease. Among the species of this kind, dropfy of the peritoneum may justly be mentioned: a disease unknown to the ancients, and so rarely manifesting itself by obvious symptoms, that many have doubted its existence; and so seldom to be met with, that neither Valsalva nor Morgagni, though indefatigable in investigating the seats and causes of diseases, have ever dissected any instances of it. From these reasons then, an account of the dissection of a woman, who, for many years, laboured under this species of dropfy, will certainly be considered as well meriting particular attention.

A woman about fifty years of age, not long after being delivered of her fifth child, became affected with dropfical symptoms. No remedies being found capable of discharging the water, which gradually increased in quantity, recourse was had to the paracenthesis. By this means a very considerable quantity of gelatinous water was drawn away, from which she had great relief. But at the end of two years it was necessary to repeat the operation. After this,



this, the water increased so rapidly, that a similar discharge became necessary every third or fourth month. Upon carefully examining the abdomen after the operation, various tubercles, in some degree moveable, could be perceived. These, while they were hard, uneven, and productive of very considerable inconvenience, could not be resolved by the most powerful remedies. But, together with the water, they daily increased in size; so that some of them became as large as the head of an infant, and at length as that of an adult.

In the space of eight years the operation had been repeated 17 different times, and by this means more than a thousand pounds of water had been drawn off, which was always of the same gelatinous nature, and of a yellow colour. During the whole of that time, she was hardly affected with any other symptoms than the enormous swelling, a sense of weight, and some degree of difficulty of breathing. All the functions of the primæ viæ continued in the natural state, she was not affected with thirst, and there was no diminution of the discharge of urine. But she became gradually emaciated, and her strength was at last so far diminished, that she could

could no longer sustain the burden, and fell a victim to her disease.

As the practitioners who had been consulted by her husband were not altogether agreed in opinion with regard to the nature of her affection, Dr Sandifort was requested to examine into it by dissection. With this request he readily complied, from the hopes that he should find something which might throw light upon other cases. And in the event he was not disappointed.

Although the surgeon who attended her had performed the operation of the paracentesis only two days before her death, and had at that time drawn off about sixty pounds of water, yet her abdomen was again remarkably distended, and the fluctuation of water could be distinctly perceived. But there was especially discoverable, in almost every part of her belly, tumours of different sizes. This was remarkably the case on the right side, which was swelled to an enormous degree, from an inequable tumour, which seemed to be composed of many others. The body being laid upon its back, this tumour tended towards the right side. On this account an incision was made there, not

far from the crista of the os ilium, that the water might be evacuated, and the contents of the abdomen more readily examined. The knife could not be made to enter without difficulty, and it had the feeling as if the parts cut were hard, and almost cartilaginous. But upon an opening being made, there came out a quantity of a yellow fluid, especially when the abdomen was compressed, which however was so viscid and gelatinous, that in falling into the vessel placed for receiving it, an uninterrupted thread was formed of it ; and it was discharged to the extent of at least twenty pounds.

The water being thus evacuated, the large hard tumours were more readily discovered, and seemed to fill the whole cavity of the belly. A section being then made from the scrobiculus cordis to the pubis, it was found that the common integuments, the muscles, which were highly extenuated, and their aponeuroses, could be readily divided. But a thicker and firmer membrane was discovered under these : This being divided and dissected from the tumours to which it firmly adhered, these could with greater facility be examined.

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The tumours which occupied the greater part of the belly were of different sizes, from that of a walnut, to the head of an adult. They had every where uneven surfaces. The largest was on the right side, and being composed of several others, had different degrees of hardness at different places. In some it had the consistence of cartilages, in others almost of bone. But at some places it was softer, and these being cut into, discharged a fluid, either of the same gelatinous nature with what was drawn off by the paracentesis, or much thicker. All these tumours adhered to that membrane which was discovered immediately under the muscles, and projected into a cavity, the nature of which could not at first be discovered.

The tumours being pushed aside, some of them to the right, others to the left, no abdominal viscus could be discovered. But the opposite side of this sac was formed by a membrane extending itself downwards to the ossa ilia and pubis. In this membrane, the course and anastomosis of many blood-vessels exhibited a beautiful spectacle. An incision being made through its inferior part, the small intestines burst forth, and being drawn out for a

little way, they appeared to be perfectly sound, adhering to a sound mesentery. The membrane being completely divided, and turned backwards, the omentum, the liver, the stomach, the spleen, and, in a word, all the abdominal viscera, were found of a healthy appearance, and in their natural situation, or at least very little disturbed. And in the cavity of the abdomen itself, which was now really opened, a small quantity only of water was found, which was of a very different nature from that filling the hydropic sac.

The membrane constituting the back part of the sac being now properly examined, there could remain no doubt as to the nature of the disease. For it appeared that the peritoneum had degenerated into this, and that the water was collected between the peritoneum and that cellular membrane which naturally connects the peritoneum with the abdominal muscles, now not only changed into a thick compact membrane, but beset also with the tumours which have already been described, and which might not be improperly compared to atheromata.

But the whole of the peritoneum was not changed

changed in this manner; for about a hand-breath below the *scrobiculus cordis*, or rather the *cartilago ensiformis*, it was indeed indurated, but not extended into a sac. And upon its being cut through, the knife immediately went into the cavity of the upper part of the abdomen. Here, therefore, an evident example occurred, of a real *hydrops peritonei*, where the water was lodged between this membrane and the abdominal muscles, not in the cavity of the abdomen. This was confirmed by the operation of the *paracentesis*, performed two days before the death of the patient. For the aperture made by the instrument was found to have penetrated not into the cavity of the abdomen, but into this sac.

Dr Sandifort concludes this chapter, by taking notice of some similar instances of the same affection. He observes, that Jo. Acholzius, a practitioner and professor at Vienna, first described it in 1581. That after this time it had been observed by several other practitioners; but that the most full account of it is to be found in a dissertation *De Hydropse Pæritonei Saccato*, published by the learned Des Bans, of whose labours the medical



world was too soon deprived, by his premature death. This dissertation Dr Sandifort has reprinted in the first volume of his Thesaurus ; but there can be little doubt that the dissection above enumerated throws farther light upon the nature of the disease.

After having given this account of the disease, we hope we shall be excused for mentioning to our readers a suggestion which presents itself, respecting a mode of cure, which may, we think, be tried in similar cases. It is evident, that in this disease, while the water cannot be evacuated by the natural outlets, its evacuation, at an artificial opening, has no effect in preventing a return of the effusion. In this respect then, it may be considered as very much agreeing with the hydrocele. And might not a radical cure be effected, as is done in that complaint, by exciting an adhesive inflammation within the cavity ? If this could not be effected by the finger of the operator introduced at the opening, might it not be accomplished by the aid of a seton passing through the sac ?

In the seventeenth chapter, Dr Sandifort gives an account of an earwig being discharged  
alive

alive from the nose. He sets out with observing, that in the writings of different authors there are accounts of various insects being discharged from the nose, after having produced different diseases. Not long since, a case of this kind occurred to him, where the disease was occasioned by an animal different from what he had before heard of, as producing any similar affection.

A lady had for a long time been affected with violent pain, referred to the inside of her left nostril, and to the frontal sinus of the same side. With this there was a copious discharge of very foetid matter from the nostrils, and other symptoms, which gave strong presumption of ozæna affecting the parts to which the pain was referred. After the trial of a variety of other remedies, vapours were directed into the nose by means of a funnel for cleansing the parts. She had employed this practice only two or three times, when she became affected with an uncommon itchy sensation in the nostril, and soon after, she discharged from it an ordinary earwig in a living state.

From the time of this discharge the pain was gradually diminished, and at length disappeared. The sanious discharge, which had form-

erly a very strong smell, was by degrees meliorated and the ulcer was healed, after having been highly troublesome to her for a very long time.

This lady had long been in the habit of snuffing up the fragrant odours of flowers with great violence. There could, therefore, Dr Sandifort thinks, be no doubt in what way this animal had got into the nose. But it was, he thinks, very wonderful that it could live and subsist there for so long a time.



## XVII.

*Observations sur la Maladie vénérienne et le Millet dont les enfans nouveaux-nés sont attaqués, avec de Reflexions sur la nature & le traitement de ces deux maladies. Par. M. Colombier. Vide Histoire de le Société Royale de Médecine. Tome 3iem. Quarto. Paris.*

THE venereal disease is so far extended, and the evils of which it is productive are so numerous, that it is without doubt one of the most dreadful scourges to which mankind are subjected. It infects as it were the sources of our existence, and the most tender age is by no means exempted from it. Infants conceived in the middle of this contagion have the seeds of it communicated to them with their life.

This communication, our author thinks, happens in two ways. Either parents having a venereal taint, produce infants, whose fluids are vitiated, and in which the disease develops itself  
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sometimes sooner, sometimes later ; or the venereal disease existing in the parents with intensity, their infants shew, at the time of birth, unequivocal symptoms of their being affected with the disease. These unfortunate victims, he observes, have hitherto almost entirely perished, and the efforts of art have been found to have had but little influence against this calamitous disease.

This distemper being particularly frequent among foundling infants, which fall under the charge of the state, government directed many trials for their preservation without effect, till about fifteen months before this paper was written, when a mode of treatment was discovered more successful than had formerly been employed. From these trials, there has resulted, we are told, an hospital for the treatment of new-born infants affected with the venereal disease. M. Le Noir, the magistrate to whom the nation is indebted for this blessing, has spared neither pains nor expence on this subject, and is, Mr Colombier observes, justly entitled to the thanks and gratitude of the public.

Before relating the plan of cure which is followed in this hospital, our author thinks it  
necessary

necessary to mention the particular symptoms of the disease in new-born infants.

The first thing obvious upon viewing them, is, that the skin both of the face and other parts of the body is so withered, that it seems to carry the marks of old age. Some of them are reduced to a state of real marasmus. Others have on their lips, tongue, and pharynx, a number of aphthæ which restrain the motion of these organs, and prevent them from sucking; and dissection shews, that the same aphthæ are extended through the gullet, and even into the stomach itself. In some the armpits, breasts, or belly are ulcerated, and discharge a great quantity of putrid sanies. But the most common symptom is ophthalmia. When the disease has made great progress, the inflammation principally occupies the conjunctiva. But in slight cases it is confined to the palpebræ.

These appearances are usually accompanied with some symptoms of the disease in the organs of generation. Most of the infants are affected with diarrhœa, and with distressing thirst. And sometimes the millet, an affection described in the end of this memoir, is joined to the other symptoms, which it aggravates not a little.



In attempts to cure, it was formerly thought indispensibly necessary to give mercury to the infected infants; and not being able to apply it externally, it was given inwardly in small doses. But this remedy, given thus immediately to the infant, in whatever way it was managed, was found to be too active, and did not succeed. Detached observations having shewn, that a mother affected with the disease nursing her infant could be cured herself, and could thus even cure her infant, it was presumed that this mode, employed on a more extended scale, might be highly useful in the treatment of newborn infants affected with the disease. Reasoning and experience having shewn, that mercurial frictions are the most efficacious means of combating the disease, and have the least influence upon the general health, it was but natural to give the preference to these.

This method being determined upon, women in the seventh month of their pregnancy affected with the venereal disease, were admitted into an hospital appropriated to the purpose, to be delivered there, and to suckle their infants, upon the condition, that, if their strength would permit, they should suckle also another infant affected with the venereal disease. Nurses also affected  
with

with the venereal disease were admitted upon the same condition. Here then it became necessary to treat the mother, both before and after delivery, as well as infants subjected to the disease, some of whom could take suck, while others were incapable of it. On each of these subjects we are here presented with some observations.

When pregnant women were attacked in such a violent manner as did not admit of delay, recourse was had to such palliative treatment as the circumstances required, care being at the same time taken to prevent abortion. But the radical cure was reserved till after delivery. Their drink was a weak decoction of sarsaparilla, or barley water, and they got small doses of mercurial panacea at longer or shorter intervals, as circumstances required.

For the three or four first days after delivery they were treated in the same manner as women who had no other disease, and the infants were given them to nurse. By the sixth or seventh day they began the use of warm baths, a dozen of which were employed with each. The first was directed only for the space of half an hour, the others for a whole hour. After  
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the bath had been five or six times employed; recourse was had to mercurial frictions, which did not prevent the rest of the baths from being used. Recourse was had to the double mercurial ointment, of which about a dram was employed at each of the first frictions. The quantity was afterwards increased, and employed at intervals proportioned to the effects observed to result from it. It is, however, to be observed, that the infants in general died, when the mercury acted upon the nurse with great energy. They were then tormented with colic pains, they had looseness, and were constantly crying. It became necessary, therefore, to use mercury with greater moderation in the treatment of nurses, who suckle one or more infants, than in any other case. And it was in but rare instances, that it was found necessary to employ more than three ounces of mercurial ointment. Their ordinary drink was rice-water, which was also given to the infant. When the symptoms were severe, they had decoction of sarsaparilla. Their regimen was watched with very great care, and a fresh-infected infant was never given to a nurse about the middle of the treatment, as it was found that this could not be done without affecting



affecting the health both of the nurse herself and of the child she before suckled.

The whole treatment for a complete recovery in general lasted two months, or two months and a half. It was rarely found necessary to extend it to three months.

The precautions used with respect to the infants, were the keeping them clean and dry, the laying them alone, the placing them in a well-aired situation, and the washing them, after every dejection, in a small bath prepared for the purpose, where there was always tepid water.

The aphthæ were touched two or three times every day with a pencil dipt in a solution of corrosive sublimate in water, in the proportion of six grains of the corrosive to a pint of water. Ulcers and excoriations were bathed with barley-water, which was also applied to the inflamed eye-lids.

The most embarrassing cases were those where infants could not take the breast, either because they were too weak, or because the aphthæ rendered sucking very painful to them. Attempts were made to nourish them, by cows, goats, or asses milk, according to their strength. They got also rice-water, and they were exposed

ed to the vapour of mercury, revived from cinabar placed in a heated iron-pot. The application of this vapour was continued for a longer or shorter time, care being taken not to fatigue them. When their respiration became frequent, they were removed from it, and carried to a place where they could breathe free and fresh air.

This practice alone did not cure those children, but it diminished the symptoms, it favoured nutrition, and it put them in a condition to take the breast of a nurse with whom the treatment was begun. In other respects, the same precautions were observed with regard to lodging, cleanliness, baths, &c.; as with children on the breast.

This detail of the practice is finished with an account of the result of the trials made in the hospital after the plan was adopted.

Between the month of June 1780, in which the hospital was founded, and the month of July 1782, the time at which this memoir was written, one hundred and thirty-six infected infants were received into it. Of these thirty-five were preserved, and at that time in good health. Seven others, who had been cured  
after-



afterwards died from dentition; the others died of the infection. But it is to be observed, 1st, That among the number of deaths, there were several whose cases were totally desperate before they were sent to the hospital; and some of them died even on the same day in which they were sent there: And, 2dly, That the method of treatment not being established at the beginning, the trials then made were not so successful as afterwards. It ought also, he observes, to be remarked, that from calculation it appears, that a greater number of infected infants were cured in this hospital, than of foundlings given out to nurse, though in a state of health; and that, prior to the treatment above described, no infants were preserved who at the time of birth had decided symptoms of the venereal disease. Hence there is reason to hope, that, in the sequel, this method may be brought to still greater perfection, and leave a result still more favourable.

Another disease which particularly affects new-born infants, is, the Muguet or Millet; and it is very infectious in those situations where a great number are collected. There are but few authors who have written of it,



and what they have said of its nature is neither precise nor satisfactory. Its chief symptoms are small white hard tumours, which appear upon the lips of infants, under the tongue, and upon the pharynx : These have also been sometimes found extended through the alimentary canal. Deglutition becomes at first difficult, and at length impossible. Diarrhœa intervenes ; the countenance becomes pale ; and there appear upon the body pimples or spots of a violet colour, which may be considered as the certain mark of approaching death. Infants that are strong and of good constitutions, and those who have good nurses, or those with whom there occur abscesses from the tumours terminating in suppuration, are the only ones which escape.

The vapours arising from a number of infants confined in one place, and which are furnished by their breath, perspiration, and excrements, are the causes, our author thinks, to which the rapidity of this contagion is to be attributed ; and the new virus is generated in the night in particular, because then all openings being shut, the air circulates with greater difficulty. As a proof of the virulence of the

con-

contagion, he mentions, that of nine infants who remained only twenty-four hours in a place where the millet raged, and who were after that transported to another hospital that they might be reared on cow's milk, not one escaped the contagion, all of them being affected by the millet.

Pure air, sound nourishment, the utmost attention to cleanliness, gentle tonics, and exposure to the vapour of mercury for a few minutes every day, are the only means of cure which have been found to be attended with any success. From this it will readily be understood, that prevention is the subject chiefly to be attended to. With this intention, it is of the utmost importance to produce general disinfection in those places which are actually impregnated. Cradles, linen, and furniture of all kinds, ought to be purified, and streams of air are to be directed through the apartments, particularly during the night: No infants should be received into the dormitory till after being bathed, and they must be removed as soon as they appear to be affected. Never more than six or eight should be received into the same apartment; and those who are in a



moribund state, who are affected with siphylis, with diarrhœa, or with ulcers, are to be separated with care from those in a sound state.

By taking these precautions, there is, we are told, almost a certainty that the contagion of this disease will be destroyed; and that a great number of infants may be preserved, to whom it would otherwise prove fatal. And the diseases of infants, it must be allowed, merit the greatest attention in the way of prevention; because, after they have taken place, on the one hand the rapidity of their progress, and on the other the remarkable delicacy of the system at that time, joined to the great difficulty which there is to get medicines introduced, furnish very great obstacles to their recovery.



## XVIII.

*Memoire sur quelques moyens aussi efficaces que prompts et faciles de remedier à des accidens graves qui surviennent assez frequemment dans les Petites-Veroles et les Rougeoles de mauvais caractère. Par M. de Laffone. Vide Histoire de la Société Royale de Médecine, Tom. 3iem, Quarto, Paris.*

THE learned author sets out with observing, that upon a comparifon of the fimple fmall-pox with thofe which are of a confluent and malignant kind, they would appear to be abfolutely two different difeafes. The fymptoms attending the one, through its whole courfe, are flight and free from danger; while the accidents occurring in the other, are of the moft alarming nature. In the one, nature left to herfelf has no need of the affiftance of art to accomplifh a falutary crifis, and to complete the cure; the other requires the conftant attention of the phyfician

to the different accidents which occur, that he may immediately employ the most proper remedies for preventing troublesome consequences.

Among those accidents which take place in bad small-pox, one which he considers as very frequent, is the occurrence of diarrhœa during the time of the eruption; and that too although, upon the first attack of the disease, care has been taken to cleanse the primæ viæ. At this period of the disease the diarrhœa cannot, he thinks, be of any other but the symptomatic kind: The nature of the stools, which are of the serous and bilious kind, their quantity, their fetor, and their frequency, are, he thinks, all of them obstacles to the regular progress of the disease; and the eruption, he tells us, is sometimes retarded, suspended, and even suppressed, so as to produce a rapid and fatal metastasis. If after these appearances we should judge that it is proper to second nature, by promoting the evacuation, in order to aid her the better to free herself from this alleged mass of putrid matter, we should unquestionably follow an erroneous method, as experience, he tells us, has demonstrated.

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The practice which he considers as being in these cases more conformable to the intention of nature, would be to employ tonic and cordial remedies, such as the theriaca, diascordium, and others of a similar nature: But from experience we learn, that these remedies, though more appropriated to the circumstances, rarely produce the desired effect in moderating or stopping the evacuation: On the contrary, they often act as irritants; the intestines become more sensible and painful, the diarrhœa is augmented, and the danger becomes imminent.

He asks, therefore, to what kind of practice, sufficiently ready and efficacious, can we in such cases have recourse? After some reasoning with respect to the nature of this symptom, as arising from the variolous virus, he observes, that in some of the provinces of France, and in other countries more distant, the use of milk as a drink during the whole course of the small-pox, of whatever kind they be, is generally adopted by the people, and even considered by the physicians of these countries as the most simple and efficacious treatment, equally adapted to infants and to



adults. He adds, that this practice, though to appearance empirical, is nevertheless successful; and merits the more attention and confidence, as having been used from the most remote antiquity. In proof of this he quotes the authority of Rhazes; and it is also, he observes, recommended as one of the proper drinks in small-pox by Sydenham.

But he was, he tells us, particularly struck with the observations contained in three Latin Dissertations published on the subject of small-pox, by Dr Antony Fischer, an Hungarian physician, about the middle of the present century. That author, we are told, treats professedly, and at considerable length, of the remarkable and uniform efficacy of milk employed as drink in small-pox of a bad kind; and particularly during epidemic small-pox, where the pustules, almost as soon as they appeared, became suddenly dry, and formed a kind of black crust upon the surface: It was by drinking milk alone that a full and regular eruption was obtained, which gave the disease its ordinary course, and favoured a successful termination.

But among the few physicians who in their writings

writings have spoken advantageously of the use of milk in small-pox, none of them, not even Dr Fischer himself, who has entered into so full a detail on this subject, makes mention of this drink for combating the dangerous and distressing accidents mentioned above, the symptomatic diarrhœa during the eruption. During that epidemic, indeed, which he particularly describes, and during which the drinking of milk produced such good effects; the patients were not subject to diarrhœa; on the contrary, there occurred habitual constipation.

Dr Fischer, however, speaks of this troublesome symptom of diarrhœa in another dissertation, where he treats of different accidents in the malignant small-pox; and without saying a single word of the utility of milk in these cases, he merely advises that it should be combated by the ordinary practices, tonics and cordials.

Not having, therefore, the authority of any direct observations in its favour, and considering that it has been condemned in bilious evacuations, Mr Laffone would not, he tells us, have ventured to administer it as the principal



pal remedy against the symptomatic diarrhœa; unless from induction, drawn from a number of concurring circumstances, he had resolved to adopt a method apparently opposite to the commonly received principles.

The ready success of the practice surpassed his expectations, in the first instance in which he employed it, being a case of small-pox of the most confluent and malignant kind, where a violent symptomatic diarrhœa was accompanied with anxiety, great prostration of strength, and acute pain in the intestines, which had subsisted from the commencement of the eruption. Cordials and opiates which were administered, had the effect only of rendering the evacuations more frequent, painful, and threatening. The patient's situation became then more critical, as the ordinary means of practice were thus ineffectual. The first doses of cow's milk, mixed with a ptisan of the root of parsley, produced so favourable a change, that in less than twelve hours the evacuations were stopt, and all the anxiety removed: The pulse became more full and soft; the pustules became elevated, and filled with laudable matter; and, by continuing



continuing the use of the milk united to the ptisan, without any other kind of remedy, or any other nutritious fluid, the disease ran its regular course. The recovery was favourable; and there remained no trace of this severe disease, excepting that alteration in the features which usually results from small-pox confluent to the last degree.

The case here described, Mr de Laffone had occasion to treat about twenty-two years before writing the present memoir; and after this striking proof of the efficacy of milk in the symptomatic diarrhœa of small-pox, he has used the same method in every similar case which occurred to him in practice. The success with which it has been attended has been so uniform, that he thinks, without danger of exaggerating, he can almost recommend it as a specific.

In observing with care the different effects of milk employed as a drink, in the different cases in which he has prescribed its use in small-pox, he has discovered it to be decidedly useful against another accident very frequent in that disease; and which, although not so dangerous as the symptomatic diarrhœa,

rhœa, has sometimes troublesome consequences, and at least occasions a good deal of anxiety and pain to the patient.

It is well known, that where the small-pox are very confluent, or the eruption is very abundant, the tongue and the whole inside of the mouth are often covered with a great number of variolous pustules. A considerable swelling happens to all these parts as the consequence of the inflammation: Deglutition becomes more and more difficult, painful, and constrained; and these pustules sometimes drying suddenly, put on a black and suspicious appearance, and add considerably both to the danger of the disease and the distress of the patient.

If in proper time recourse be had to milk by way of drink, or as soon as the mouth begins to be thus affected, the pustules make there but little progress, and the inconvenience they occasion is much more supportable. And the effects which Mr de Laffone has witnessed in such cases, seem to him to demonstrate that we may attribute to milk the singular property of almost enervating the venereal poison; or at least of moderating and weakening its dele-



deleterious impresson in consequence of immediate contact.

Having thus formed the most favourable opinion of the utility of milk in general in cases of bad small-pox, and particularly in cases where symptomatic diarrhœa occurred, he presumed, from very direct analogy, and from a very natural induction, that for a similar accident in measles the same practice might be adopted with effect. Some physicians, indeed, who have written on the treatment of the measles recommend milk united with proper infusions, as one of the drinks best suited to them : But none of these authors prescribe milk particularly against that diarrhœa which sometimes happens, at a time when the manifest danger arising from too frequently repeated evacuations requires that they should be speedily restrained.

It is by no means a rare thing in measles, to observe, at the commencement of the eruption, spontaneous bilious evacuations. Experienced practitioners are not apprehensive of them when they are moderate : They do not, in that case, derange the ordinary course of the disease ; on the contrary, it is remarked  
that



that they are useful : But if they become frequent, painful, and abundant, the countenance turns pale and collapsed ; the eruption which has already taken place disappears, and not a moment is to be lost to remedy this accident. In such cases, he tells us, the use of milk alone, by way of drink, has always succeeded with him equally as in the case of the small-pox.

Nothing, he observes, appears to him better fitted to confirm the advantages of this method, both in small-pox and measles, and to give it greater weight, than to relate some observations, the authenticity of which is too remarkable to be neglected.

When the late king, Louis XV. was attacked with that contagion, which terminated the life of that good prince, his daughters, attending only to the calls of affection, and despising the most imminent danger, with a degree of courage which justly merits the highest eulogium, would not separate themselves from their august father, although none of the three princesses had yet had the small-pox. They were not long of experiencing the effects of the contagion. A few days after the death of the king, all the three were

attacked at the same time with confluent small-pox at the castle of Choisi, to which the court had retired.

M. de Laffone, as physician to Madame Adelaide, was particularly charged with the treatment of her case, in conjunction with three others, Messieurs Bourdelin, Lemonnier, and Richard, called at the desire of the princess to aid him with their advice. The eruption began very favourably; but about the end of the first day there were several spontaneous evacuations, very abundant, and of a matter the crudity and smell of which pointed out its bad tendency. Notwithstanding these first evacuations, the eruption made the usual progress; but, during the course of the second day, the symptomatic diarrhœa increased. Abundant evacuations of the same kind now returned at very short intervals; and the countenance soon became less animated, the pustules sunk, and nothing could be observed either on the face or breast but spots of a very suspicious colour: The pulse, losing its spring, became smaller, more frequent, and even a little irregular. The patient began to feel a sort of inquietude and  
general



general uneasiness, for which she could assign no particular reason; and, to crown her distress, the menstrual discharge began to appear.

In a situation thus alarming, Mr de Laffone proposed to his brethren to employ without delay cow's milk, mixed with a ptisan of the root of parsley, by way of drink. The ptisan was formed by pouring two pounds of boiling-water upon two ounces of the parsley-root, well washed and cut down, and then allowing it to infuse for some time. This advice Mr de Laffone supported, by mentioning the success which had attended his practice in former instances, and the little dependence that was to be put upon the common practice. This practice was immediately adopted; and the animal-broths, as well as every other medicines which had before been ordered, were given up.

In a short time, appearances underwent a most favourable change. Two or three small evacuations, which she now had at longer intervals, were less ferous, and had no remarkable fetor. In a short time the diarrhoea entirely ceased. Till the twelfth day of the  
2 disease,



disease, this mixture with milk was administered alone, every two hours, or less frequently, according to the intensity of the fever. Sometimes it was mixed only with simple water, and it was always given to the extent of about five ounces. In the intervals she got nothing but water, a little sweetened. By strictly following this plan, every thing went on well during the remainder of the disease; and the pustules, which appeared in great numbers on the tongue and inside of the mouth, were evidently stopt in their progress. The deglutition soon ceased to be either painful or difficult; and, by means of a few purgatives repeated towards the end of her disease, the cure was completed.

Nearly about the same time, Mr de Laffone's own daughter was likewise subjected to small-pox of a very confluent kind. After the use of cordial remedies, the eruption went on successfully; but before this operation of nature was entirely completed, the intestines suddenly became affected with pain, and seemed disposed to relaxation: The menses had appeared; there supervened a great degree of inquietude, of uneasiness, and agitation. He

immediately determined to make use only of milk, by way of drink, in the manner already mentioned: Quietness was suddenly re-established, and continued; and the disease terminated happily.

During the spring of the year in which this memoir was written, the measles became epidemic in Versailles and the environs. The queen was attacked with them. This was a disease which her majesty dreaded very much, as they had been particularly severe in the Imperial family, to which she belonged. The cough attending them was sharp, convulsive, and frequent; and although the eruption went on well, yet the same distressing cough continued. She had already had some of those bilious spontaneous evacuations, which experience teaches us to consider as useful: but at the end of the second day of the eruption, there supervened pains of the intestines; there took place a copious diarrhœa, and the menses appeared. During the night there occurred, one after another, serous and fetid evacuations: The countenance became collapsed, and those parts in which the eruption had already taken place became pale: The humour  
of



of the measles appeared to be almost extinguished and repelled: The pulse was small, sharp, and contracted: The nervous system, naturally delicate, was very much affected; and the agitation and inquietude were extreme.

In the treatment of this case, Mr de Laffone was conjoined with two of his brethren. They agreed to prefer to every other remedy, the use of cow's milk, united to a ptisan of the root of parsley. The consequence, we are told, was fortunate, and almost instantaneous; for the second dose of this drink stopt totally the diarrhœa, and quieted the intestines. The matter of the measles again came outwards in great abundance: Every thing was re-established and meliorated. Next day she had a single stool of properly formed and well-digested matter: The cough became much less frequent; the nervous agitations were diminished; and the same drink being continued, no other accident disturbed the regular progress of the disease, till a complete recovery had taken place.

After this Mr de Laffone, in the memoir before us, speaks of another kind of accident



very common in the confluent small-pox; and points out the method which has always succeeded with him in preventing different troublesome consequences which are apt to result from it. When the eye-lids, at the time of the eruption, are covered with variolous pustules, they often affect their edges where the hairs are inserted; and sometimes even the ball of the eye itself is not free from them. It is well known what evils result from these pustules, as the effect of inflammation and supuration.

Being satisfied that the most certain means of warding off all these accidents, would be by preventing the eruption of variolous pustules on the eye-lids and eye, or at least by suspending and stopping their progress and making them disappear, it occurred to him that the distilled water of roses, by its cooling, tonic, and astringent virtue, might, when properly applied in a topical manner, answer all these intentions.

In the most remote ages, the Arabian physicians, as appears from the writings of Rhazes, made use of rose-water as an excellent preservative for the eyes in small-pox. It is also,  
he

he observes, used among modern practitioners, either alone or mixed with some other ophthalmic ; but only with the intention of cooling the eyes, of hindering the eye-lids from growing together, and of removing the acrid humour, which, lodging about the globe of the eye, might irritate and inflame it. With these intentions it has been common to direct, from time to time, such lotions.

The preservation of the eyes, in such cases, Mr de Laffone justly considers as an object of the greatest importance. Desirous of preserving them by means of rose-water, he took care that from the commencement of the eruption the eyes and eye-lids should be almost continually wetted with it, by means of a pencil of fringed linen. By repeating for several days together, and at almost every quarter of an hour, this lotion, which by no means fatigues the patients since they derive from it very great relief, Mr de Laffone tells us that he has always accomplished his intention of preventing the progress of those pustules subjected to this species of habitual bathing ; and that he has even seen every trace of small-pox disappear in the affected part,



without any inconvenience whatever resulting from it.

Among a great number of happy proofs of this method, two in particular gave him not a little satisfaction. In the confluent small-pox of Madame Adelaide and his own daughter, there had taken place a very considerable eruption on the eye-lids, and some pustules had even begun to appear on the globe of the eye itself; but by means of the rose-water immediately employed in the manner already mentioned, there did not remain the slightest vestige of this eruption, which before was very apparent. Since that period their eyes, thus preserved, have suffered no alteration whatever.

These remarks and facts which we find in this memoir, unquestionably well deserve to be made as public as possible; since their object is to confirm the efficacy of practices little used, for remedying dangerous and distressing accidents, in a manner which, while it is said to be certain, and accommodated to all circumstances, is equally simple and easy.



## S E C T. II.

## MEDICAL OBSERVATIONS.

## I.

*The History of a Case of Universal Latent Cancer.* By Dr Richard Kentish physician at Huntingdon.

I HAVE lately had a very singular case of *universal latent cancer*. Mrs K——g, a maiden lady, aged 64, had long been troubled with pains in the hip, thighs, back, and other parts of the body. These were treated as nervous spasms. She took immense quantities of bark; used sea-bathing; but found her complaints aggravated. She was the patient of an eminent physician at Cambridge.

Her pains became so violent, and her emaciation so great, that she was not expected to live many days, when I was desired to visit her. I found her a perfect skeleton. She had a great degree of hectic fever, but no one symptom of nervous debility. On inquiry, I found that she had suffered amputation of a cancerous breast about two years before the commencement of her present complaints. She had a small tumour on the lower maxilla, which, on examination, appeared to me an exostosis: She had likewise small tumours of the same nature on the os frontis; and she complained of a stiffness in the neck, which, she said, certainly arose from a sudden turn of her head in bed: but I found a small glandular tumour in this place. What will appear rather extraordinary, is, that my patient carefully concealed several other tumours, which, at my future visits, were observed. The inguinal glands were considerably enlarged, and the whole occiput filled with exostoses of various sizes; the maxillary glands were diseased, and above the left clavicle were knotty swellings as large as small nutmegs.

No disease appeared near the seat of the extirpated

tirpated mamma: but the ribs on that side, together with the sternum, were protruded; and the glands under the adjoining axilla were enlarged.

I put my patient on a course of cicuta, to which I joined merc. calc. to the extent of a quarter of a grain daily.

She appeared to receive benefit: the tumour on the chin lessened. But one morning, as she was turning round, her thigh-bone cracked, and was one of the completest fractures which I ever saw. Mr Mackie (the surgeon) said the ends felt gritty, like diseased bone.

From this period, my patient grew daily weaker and weaker: She continued her medicines; and took to the amount of eighteen grains or one scruple of the extr. cicutæ every night, with an anodyne draught. The merc. calc. was occasionally omitted and repeated: She had a decoction of Peruvian bark and sarsaparilla, which was seldom omitted; but, at the end of about three months from the time I first visited her, she died.

On examination, almost every gland appeared diseased; and I have no doubt that the  
bones



bones were all affected with cancer. A callus seemed to have been imperfectly formed; but she did not live long enough after the fracture for the formation of a proper union.

## II.

*The History of a case of Hydrocephalus terminating fatally, after a salivation was excited by the use of Mercury. By Dr William Lee Perkins physician at Kingston upon Thames.*

ON Tuesday (Jan. 10. 1786), I was called to see Miss L——, a child two years and a half old. This was the sixth day of her illness, at least of that which seemed to require any attention; though she had been observed to be drooping, or slightly ailing, at times, for near three months before. The symptoms were as follow.

Pulse weak, quick, (140 in a minute); considerable heat of the skin: Frequent red flushings

ings in the face; sickness of the stomach, and retching: Slight stupor; from which, whenever she was roused to take either food or medicine, she took both with great greediness. The pupils of the eyes very much dilated, and continued so in the strongest light: She was likewise quite blind, and had been so for two days past; the blindness being preceded by a strabismus or squinting. Some stools were passed this and the preceding day, sometimes of a green, sometimes of a dark colour. Three teeth were now discovered, just come through the gums, and another seemed very near through: The tongue and mouth were moist and clean.

From the principal appearances above-mentioned, I did not hesitate immediately to declare to the parents my opinion, that the disease was occasioned by water collected in the ventricles of the brain.

She had been purged several times; and had blisters applied about the head and neck, some of which now discharged copiously.

Apprehending the cause of the disease to be as before observed, and finding no good effect from what had been hitherto applied, I  
deter-



determined to make trial of the method recommended in the Medical Commentaries by Dr Dobson and Dr Percival ; regretting the want of an opportunity for an earlier and more satisfactory trial. I directed, however, that one grain of calomel should be given once in six hours ; and that one scruple of the strongest mercurial ointment should be carefully rubbed into the legs and thighs morning and evening.

Jan. 11th, She had taken four grains of calomel, and had three scruples of the ointment rubbed in. All the symptoms much the same.

12th, She had taken only three grains more of calomel, her mouth being fast shut, so that nothing could be got down after yesterday noon ; although she had been once sensible in the night, and spoken : The ointment was therefore directed to be rubbed in thrice a-day, and a nutritive clyster to be injected once in four or five hours. The right-eye was this day observed to be somewhat inflamed, and the flesh of the face felt rigid.

13th, The pulse very irregular ; sometimes slower, sometimes quicker, fluctuating between 80 and 160, with frequent red flushings



ings of the face: The pupils of the eyes more contracted; but still blind. The other eye was this day inflamed; a difficulty of breathing came on; and the symptoms in general were more unfavourable, and indeed seemed to indicate a gradual tendency to dissolution. The ptyalism came on this day.

14th, The ptyalism copious; respiration still laborious. Convulsions had come on last night, which lasted two hours; and she moaned much and loud: She had one stool: Nothing could be got down by the mouth. The nourishing clysters were continued, and a small quantity of the ointment rubbed in.

15th, The convulsions and moanings came on again this morning about six o'clock, and continued till between nine and ten: The ptyalism copious: The right-arm was of a blackish purple colour; and she died the same day.

Throughout the whole of her illness, at least that part of it which I saw, she lay in a stupor, or state of insensibility, without any of those shriekings which are so often observed to happen in the last stage of this disorder.

After death the head was opened, and upwards

wards of four ounces of water were found to have been collected in the superior ventricles of the brain, which gushed out with great force on cutting into them.

### III.

*An Account of two cases of Insanity, one of which was cured by the use of the Fox-glove: Also a case of Hemoptysis, cured by the same remedy. In a letter to Dr Withering. By Mr William Jones surgeon in Birmingham.*

SIR,

THE medical profession is infinitely obliged to Bonetus, Morgagni, and Lieutaud, for the industry they exercised in inquiring into the seats and causes of diseases, and the accuracy with which they have in many cases distinguished them.

The descriptions given by these authors of the state of the encephalon in those who die insane, correspond with the observations of a modern



modern physician \*, and with one of mine. But in these descriptions they have, in most instances, omitted to inform us of the state of symptoms during the life of the patient.

These circumstances, added to the successful treatment of a case of insanity by the use of the fox-glove, have induced me to trouble you with this letter, in order that you might communicate it to the world in whatever mode you might think most eligible.

Last winter I had an opportunity of examining for morbid appearances in Mrs R——, who died insane in her 42d year. Her complexion was dark, her eyes and hair black. She was, during the latter part of her life, habitually costive; had few hypochondriac symptoms, being naturally cheerful, and having great spirits.

The approaches of the disease were gradual. It was preceded by slight transient pains in the right hypochondrium, which were taken but little notice of; some pain in the head; alteration of disposition; and increased costiveness.

The more evident commencement of the  
dif-

\* See London Medical Journal, Vol. VI. Part ii. for 1785.



disease was accompanied with the common symptoms of fever, together with dejection of spirits, and disquietude of mind. There was also a degree of redness in the face, and partial sweats; sometimes confined to the forehead, at others over the whole face; while the extremities were cold, and generally dry, or else covered with small cold sweats. The urine was high-coloured, small in quantity; and the bowels obstinately costive.

An increase of all these symptoms attended the progress of the disease, which proved fatal in about ten weeks from its first appearance.

The menses appeared at their regular periods; but the quantity discharged, towards the last, was small.

On examination, after death, I observed the blood-vessels of the brain unusually turgid; the dura and pia mater thickened, the former uncommonly adherent to the skull; and water effused between the dura and pia mater, and between the pia mater and the brain. The ventricles were also distended with water.

The liver was universally obstructed, and of a deep yellow colour; the gall-bladder

nearly two-thirds full of a very viscid, and almost black, bile.

Though Bonetus, Morgagni, and Lieutaud, have not given complete histories of this disease; yet they unitedly prove these morbid appearances to be frequent in the head.

The appearances described excited my attention, and indicated a method of cure, which I have since found successful in one case of insanity. But I attribute the facility with which the cure was accomplished, to the diuretic properties of the digitalis, which have been so fully demonstrated in your late work upon that subject †.

MISS P——, aged 34, of the true atrabilious temperament, was first discovered to be disposed to insanity about the middle of August 1785, by the common symptoms. She was free from the delirium, at intervals; and, at those times, was observed to complain of pain, giddiness, and dizziness in her head, within a fortnight previous to my seeing her. She also complained of frequent tremblings,

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and

† See an account of the Foxglove, and some of its medical uses; by W. Withering, M. D.



and of pain in her back, within the same period.

A few weeks before this attack, a sister of hers had been seized with insanity; and was put under the care of the master of a private mad-house.

Her disorder increased; so that she became almost unmanageable by her friends: And early in the morning of September 2d, she escaped from her mother's house in the country, and came to Birmingham, to the house of a relation of the family, where I first saw her, on the morning of the next day. She was asleep in a chair, for she had not slept the preceding night. Her face was somewhat red, and her pulse 92 in a minute.

After hearing the above particulars from her brother, I advised him to have her conveyed home, which was done; and I saw her again in the evening. She was then extremely stupid, at intervals, for several minutes together; and, when out of her reveries, seemed disgusted with her friends, &c. as is usual under such circumstances.

I first took seven ounces of blood from her arm; and, while it flowed, observed a small tremor



tremor in the hands, arms, and face : and, afterwards, she seemed somewhat cataleptic, retaining any posture in which she was put, though without rigidity of the limbs, or syncope. Her face turned rather red several times in a minute ; her pulse was then 120. I gave her  $\mathfrak{z}$ iss. of a purging mixture (1), and a grain of the fox-glove in pills (2).

Two of these pills, and two large spoonfuls of the mixture, were directed to be given twice in a day, at any time when they could be got down. Her feet were then bathed in warm water for half an hour ; immediately after which she was put to bed.

I saw her again the next day (Sept. 4th), and was informed that she slept a little, and that her skin was moist during the night. Her

U 2

urine

(1.)  $\mathcal{R}$ . Salis Glauberi  $\mathfrak{z}$ iss. Solv<sup>r</sup>. in  
Aquæ puræ  $\mathfrak{z}$ v. et adde  
Olei Olivarum optim.  
Mucil. Gum Arab. aa.  $\mathfrak{z}$ ss. m.

(2.)  $\mathcal{R}$ . Fol. digital. siccat. pulv.  
Spec. Aromat. sing.  $\mathfrak{z}$ ss.  
Conf. Rosarum,  $\mathfrak{z}$ ss. m.  
F. Pil. xx.

urine was small in quantity, high-coloured, and deposited a brownish sediment. No stool. The pulse as on Saturday evening. She kept her bed all day, and appeared to her friends to be somewhat more calm than she had been since the commencement of the disease.

The appearance of the blood did not indicate an inflammatory diathesis, it contained rather a large proportion of serum of the usual colour.

On the 6th, I found her pulse reduced to 68. She had a costive stool that day, which was the first evacuation of the kind since my attendance; though (between the 4th and 6th) she had taken two doses of the pills and mixture. No increase in the quantity of urine. She was in bed, and had a gentle moisture on the skin; but her forehead was much warmer, and more moist than her body. *Omittantur pilulæ, et sumat dosin Misturæ bis in die.*

She continued better till Thursday (September 11th), when I found her as bad as ever; her pulse 120 again, but somewhat weaker than at first. They had got down only two doses of the mixture since Tuesday.

She



She had two costive stools; and her urine was still small in quantity. We obliged her to swallow some of the purging mixture, and attempted to give her three several doses of the pills; but I am not sure that she swallowed any of them. I then prescribed a more drastic purgative (3). *Sumat 3i misturæ infra præscriptæ, omni vel 2<sup>da</sup> quaque vesperi, pro re nata; et duas pilulas omni mane.*

Wednesday (September 14th), I observed her face rather red; her forehead too warm and moist; and her tongue (seen this day for the first time) white. She swallowed two pills, and about a spoonful of the mixture given by force on Monday 12th. She had another stool in the course of this day; and was then observed, for the first time, to have made an increased quantity of urine. I desired that her urine might be measured every 24 hours, when possible. About this time the disease seemed aggravated every second day;

U 3

and

(3.) R. Rad. Hellebori nigri ʒss. Contunde et macera in Aq. font. q. f. per horas ij. ut colentur ʒv. et adde.

Ol. Oliv. Mucil. Gum. Arab. aa. ʒss. m.



and a tendency to remissions of this kind was observable through the whole of her illness.

A dose of the pills and mixture were given her without force, once each day, on the 14th, 15th, and 16th; which purged her pretty much, so that her urine could not be measured.

On the 18th, her pulse was reduced to 80. The redness and partial sweats on the face had been disappearing gradually, and it had looked rather yellow for several days past.

September 21st, Her countenance was nearly restored to its natural state, and the yellowness of the face was gone. She has had no stool since Saturday morning (17th), but has made plenty of urine. Her pulse about 90. She was extremely stupid and fullen, about this time, for several days. Her forehead was moist in a very small degree, and not hot. She threw away her medicines on Sunday 18th, so that she has had none since Friday 16th. Her urine settles still of a dark colour, but the sediment is not so copious as formerly. *Sumat dosin (ʒi.) misturæ purgantis (infra præscriptæ) alternis auroris, et ʒi. infusi digi-*

*digitalis (infra præscripti 4.) omni nocte, et illis auroris cum mistura purgans non sumatur.*

About this time I mentioned the case to you ; and gave the infusion of fox-glove at your request, with an intention to excite vomiting.

September 25th, She took a dose of the purging mixture on Thursday morning (23d), but without effect ; and a dose of the infusion on Friday morning (24th), and again at night ; and the purging mixture on Saturday morning. She had one stool each day, on Friday and Saturday ; during which last day she vomited three times, and complained very much of nausea afterwards.

It is evident that this vomiting and nausea were owing to the digitalis ; for during its operation in this way, its diuretic powers were suspended, as is not unusual.

They observed the quantity of urine to be about a pint in twenty-four hours, and the sediment somewhat whiter than before. The

U 4

partial

(4.) R. Folior. Digitalis ficcator. ʒiſs.

Aq. font. bullientis, q. ſ. ut colentur ʒvi. et  
adde

Spir. Lavend. C. ʒij. m.



partial sweats on the forehead ceased on the 25th. She has taken her medicines for a few days past, without giving any trouble. She had one purging stool to-day.

September 30th, I found her better than I had ever seen her before; her pulse 74 in a minute. She had taken the infusion every night, and every other morning, except one, since Sunday; and the purging mixture every second morning, except this morning, when she took the infusion. The urinary secretion is very considerable, amounting to three pints in twenty-four hours. The purging mixture has not operated much since I saw her last; but she vomited three times on Monday 26th, and twice on Wednesday 28th, after taking the purging mixture. This vomiting is, therefore, not to be attributed to the digitalis alone.

The state of the mind is considerably better.

October 4th, I found her perfectly rational. Her pulse from 56 to 58 in a minute. She has only taken the purging mixture once since my last visit, viz. on Friday evening; and she vomited all that night, and all day on Saturday. They do not know that it purged her at all that day: She has not taken of ei-  
ther



ther medicine since. I then desired she might be without medicine for a week, and have no restraint in diet; except that I wished her not to drink ale, spirits, or wine. And,

On October 11th, I saw her, for the last time, perfectly well.

She recovered the proper use of the faculties of her mind, gradually; in proportion as she took the medicine; but the change that took place after September 24th, when she began the use of the fox-glove infusion, was very remarkable. This patient was regular a few days before I attended her. At the following period she was too weak to have the discharge.

Insanity (as I am informed), has not been hereditary in either of the families to which my two patients belong.

*Case of Hæmoptysis cured by the use of Fox-glove, after other means had failed.*

ON June 27th, 1785, R. G——, aged 16, applied to Mr Mynors for his advice. He had been ill three or four days, and complained of a pain in the right-side of the thorax.

He

He had also a cough, quick pulse, and other usual symptoms of fever, attended with costiveness. His breath was remarkably fetid, and an acrid vapour was perceptible in it.

Mr M. directed antimonial powders, and an antifebrific julep, to be taken every third hour, with a cooling diet, which were continued to the 29th.

On the 29th the febrile symptoms had given way in some measure, but the cough was frequent and painful; therefore a spermaceti mixture was directed to be taken occasionally, and the powders were continued as before.

On the 30th he was seized with hæmoptysis, and lost large quantities of blood, which came up in his fits of coughing; for which a styptic acid julep, with the addition of small doses of the Thebaic tincture, was administered at first.

I saw him soon after this attack, and took eight ounces of blood from his arm. I then directed nitrous aperient powders to be taken every second hour, mixed in a saline julep, and diluted with gruel.

July 1st, The powders not having purged him, I directed a cathartic, which operated



several times ; and continued the medicines prescribed on June 30th. As the febrile heat and discharge of blood appeared a little diminished, this method was continued till the 6th, with apparent good effect. He was, however, on that day, again attacked with coughing, and profuse discharge of blood. I therefore bled him again to eight ounces ; and, as he was rather costive, directed repeated doses of a purging mixture to be taken every hour till it operated, and a styptic anodyne julep every fourth hour after the operation of the purgative. But the spitting of blood continued so frequent, with a pulse never less than 120 in a minute, and other febrile symptoms, that, on the 7th, by the advice of Mr Mynors \*, I directed a grain of the powder of the dried leaf of digitalis to be given morning and night, and a dose of the styptic anodyne julep every four hours, as before.

When he had taken four doses of the digitalis, the hemorrhagy was so diminished, and the pulse so reduced, beating no more than 70  
in

\* Mr M. observing, that he recommended the above with a view to diminish the increased action of the heart, and of the whole vascular system.



in a minute, that I thought proper to discontinue the exhibition of the Fox-glove, and to give only the styptic anodyne julep.

On the 8th and 9th, he took each night a grain of opium, on account of restlessness. The julep was continued.

On the 10th, a purging mixture was directed, of which he took a dose once or twice a-day, occasionally; and the julep was continued till the 13th, when he was well.

In a few days he was able to ride thirty miles into the country, where he staid a fortnight; and returned strong, and recovered in flesh. He continues very well.

I remain,

S I R,

Your obliged Friend,

And most humble Servant,

WILLIAM JONES.

IV. *The*

## IV.

*The History of an uncommon Tumour on the Breast, which was successfully cured by means of a seton. By Mr James Watfon surgeon to the Royal North-British Dragoons.*

**I**N the month of January 1784, a young healthy foldier of the Grey's was attacked with all the ufual fymptoms of catarrh. Thefe foon gave way to medicines then employed, and no complaint feemed to remain; excepting that he perfifted in faying, he had an unufual fenfation in the left-fide of his cheft, and that fometimes it was attended with violent pain. I was not at that time with the regiment, but fome means were then ufed to relieve him; without, however, having the defired effect: And, about a month from the date of his complaints, a fullnefs began to be perceptible on that fide where he felt the pain. This continued for fix or feven months, gradually increafing in fize and hardnefs: But,

3 from



from the third month, the principal inconvenience felt was from its bulk, the pain being considerably lessened. About the tenth month, it seemed to have acquired its full size; being now about seven inches in length, and three and a half in diameter, forming a kind of oblong figure, and extending forwards to the edge of the sternum.

The patient had hitherto enjoyed tolerable health, at least for the last six months: But, about the 11th month, he was seized with a bad cough, attended with very difficult respiration. He lost his appetite; a hectic fever was seldom absent, and that too accompanied with profuse sweats. The tumour also now gave him much pain.

The regiment being at that time in Manchester, he was admitted a patient of the Infirmary; and, by the advice of Mr White, and other gentlemen of the faculty, he used a variety of medicines. External applications, as well as internal remedies, were employed. To all these, however, the tumour in no degree gave way: Its hardness was rather, indeed, more considerable than before; and it seemed firmly attached to the ribs and sternum.



num. Extirpation was thought of; but the size as well as situation, independent of the patient's general health, rendered that operation out of the question.

I at that time proposed a seton being passed through it, of which some of the gentlemen seemed to approve. But then, as the patient was thought so much reduced, and the hectic symptoms being at that time rather worse, it was judged a dangerous attempt, and delayed: In short, it seemed to be the general opinion that nothing could be done. A suspicion also prevailed, from the length of time the tumour had existed, that probably the bones themselves were affected.

About this time the regiment was to march for Worcester. The patient himself was anxious to go there; and, accordingly, was conveyed upon the baggage-waggon. About the 5th day of the march, he complained that the motion of the carriage produced a very different sensation in his breast from any he had before felt; the pain was more acute, and the heat considerably increased. Upon examination, I found an inflammation had commenced upon one side of the tumour; which,

which, I thought, was softer. However, in about four days more, a suppuration had evidently taken place; and, soon after our arrival at Worcester, a fluctuation of matter could be perceived in every part of it.

Recourse was now had to emollient poultices, in order to complete the suppuration: However, I had but little hopes of his recovery. His symptoms were all alarming; and I thought it probable, should an operation take place, or the tumour burst spontaneously, that the discharge must be so immense as to cut him off.

Upon advising with an eminent surgeon in Worcester, he gave me but little hopes of success from any attempt to relieve him. His idea of the case was, that a communication subsisted betwixt the cavity of the chest and tumour. This the violent cough and asthmatic complaint seemed to render probable. However, it appeared to me, that the size of the tumour, together with the violent pressure made upon the intercostal muscles, might account for these symptoms, independently of any connection with the cavity of the thorax.

The



The misery of the patient was now so very great, that I was daily importuned to open his tumour. And having, on the 23d of April last, resolved to do it, (being 15 months from its first appearance), I for many reasons preferred the seton-needle to any other instrument. I could regulate thus the discharge by it better; at the same time, I flattered myself the keeping of the cord in, would be of the utmost service in the cure.

Having then introduced a common needle about the bottom of the tumour, I carried it in a slanting direction upwards, where I brought it out at the extremity. The discharge, during the operation, amounted to near three pounds. The pus was good, and without any smell; little or no blood was mixed with it.

The patient bore the operation wonderfully well, and expressed much satisfaction at the instantaneous relief he had experienced. The third day I removed the dressings, and shifted the cord. The discharge had been very considerable, and rather watery. An opiate was then given, and repeated every night, which soon changed the appearance of the discharge.



This I attributed to the opiates, having before experienced their good effects in that way. The hectic symptoms were getting daily less: The continuance of the cough made me hesitate about the propriety of using the bark. However, I began by giving small doses, acidulated with the elixir of vitriol, and continued increasing them, without any bad effects arising to the patient. Indeed, his cough, I found, got better in proportion as the tumour diminished.

The discharge, for several weeks, was very considerable. The tumour was now in size very trifling. The cord was removed in two months; and six weeks more completely healed up the breast. Weakness (the only one of all his complaints which remained) was also removed by the use of the cold bath; and he now does his duty in as perfect health as any soldier in the regiment.

V. *The*

## V.

*The History of an Uncommon Mortification of the Inferior Extremities, which succeeded hard drinking; and which terminated fatally.* By Mr James Watson surgeon to the Royal North-British Dragoons.

ON the evening of the 9th of June 1785, a young healthy foldier of the Greys, having been violently intoxicated, went out of his quarters. He was found next morning, and conveyed to bed in a state of insensibility. During that day he slept much; but, at intervals, when awake, drank immoderately of cold water, and eat nothing. His companions took no notice of this, imputing it to the effects of liquor.

In this way he continued the succeeding day, still much disposed to sleep, and equally anxious for the water; which they allowed him to drink at pleasure.

On the third morning he was reported to me, and the above circumstances described.

Upon visiting his quarters, I found him crying out violently with pains in his legs; which, he said, he had lost the use of: And, upon examination, I found them perfectly cold, and the circulation stopped. No pulse was perceptible.

Recourse was immediately had to cordials of various kinds; and, at the same time, every means used to produce circulation in his limbs, by means of friction, heat, &c.; but without effect. During that day no alteration took place. In the evening he was delirious, and with difficulty kept in bed: Upon which a large blister was applied between his shoulders.

Next morning I found his legs had made a most rapid progress towards a state of mortification; and no pulse was yet to be felt. The bark, conjoined with cordials, was now given in as large doses as his stomach would admit of. Some spirituous applications were also used to his legs.

On the 11th, no alteration took place. I made some incisions, and found the mortification already very deep, in every part, from the toes to both knees.

The



The 12th, they began to form vesicles, which broke and discharged a highly offensive serum. Towards this evening, I could (for the first time) perceive his pulse, which was extremely feeble and irregular.

I now carried my friend Dr Johnston (an eminent physician in this place) to see him, who approved of what had been done; and seemed of opinion, nothing would be of service. Amputation was out of the question; for, independent of the patient's life being saved (supposing it would answer), at the expence of both limbs, which I will ever think is a purchase too dear, he never, from the beginning, had strength sufficient to bear an operation.

He continued two days longer in this shocking state; his legs, of course, getting more and more putrid; when (on the morning of the 15th), death put an end to his sufferings.

*Query.* In the foregoing case, whether are we to attribute the violent effects produced by the liquor to its quality; and suppose that, by acting as a poison, it had so far destroyed

the energy of the system, that the heart was unable to propel the blood to the extreme parts? Or, that much the same consequences arose from its merely acting as any stimulant would? But the system, being in a highly irritable state, was doubly affected; and, while exhausted, received nothing to support or restore it; on the contrary, the cold produced by the water taken into the stomach, must have had no small effect in confirming the torpid state already commenced.

What induces me to speak of an irritable habit, is the patient's having had a violent inflammation upon one of his legs, about six weeks before, and that brought on by the most trifling accident.

## VI.

*Account of singular effects from the external application of a strong infusion of Tobacco, employed for the cure of Psora. By Mr P. Grant surgeon at Stonehaven.*

A MIDDLE-aged country man had (by lying in a strange bed) caught the itch. In order to cure this disease, and prevent his wife from being infected, he prepared a strong infusion of roll-tobacco in water ; with which both he and his wife fomented their bodies. This they did about nine o'clock at night ; and, by ten, they felt themselves as if intoxicated with spirituous liquor. They went to bed, thinking that this giddiness would soon go off : but it still continued ; and became, now, accompanied with a most violent headach, and very dry hot skin. In the man, likewise, with a violent retching and vomiting : In the wo-

X 4

man,



man, with a considerable looseness, and pain in the lower part of her abdomen.

In this condition they passed the night, without any advice or assistance. But, in the morning, some of their neighbours having gone in and found them in this situation, insisted on sending for me : And the man, as well as the spectators, thinking that he was just dying, readily agreed to the proposal.

When I went, I found them in an alarming situation. They had both a violent headach. Their skin was perfectly dry, and remarkably hot. The man's pulse was hard and quick ; the woman's was rather soft, but frequent. They had both a great thirst, but could not drink much at a time. The man continued to have a violent retching to vomit, and severe spasmodic contractions in his arms and hands ; with dyspnœa to a very great degree. The woman's looseness had stopt before I saw her ; but she had a great anxiety and sickness, quick breathing, and great oppression at her breast.

The concomitant circumstances of the case readily suggested to me the indication of cure : I mean, the removal of the spasmodic contraction

striction from the extreme vessels on the surface of the body, so as to allow the sweat to flow; for this evacuation was totally suppressed. And, for this purpose, (as the safest and most expeditious means), I employed the warm bath, which had the wished-for effect; for, after the application of it for about three quarters of an hour, they were laid to bed in blankets, and got a most copious sweat. This very soon relieved every complaint, excepting the headach. The man's spasmodic complaint was totally removed; and his stomach, which before retained nothing in it, would now receive plentiful draughts of sack-whey; which I gave both of them, for the purpose of keeping up the sweating. And this I continued for near twenty-four hours, when they found themselves very easy, and perfectly free of all complaints: And, in four days thereafter, they were able to go about their usual employment, enjoying as good health as before.

## VII.

*Remarks on the Hydrophobia, and on the Efficacy of the Ormskirk Medicine for the Bite of a Mad Dog. Communicated to Dr Duncan, by Dr Houlston physician to the Liverpool Infirmary.*

**I**N consequence of the observations on Canine Madness, inserted in your Medical Commentaries (Vol. VIII.), being republished in my *Observations on Poisons*, I was lately favoured with some remarks on the subject from an English physician, the public professor of chemistry in a foreign university; a man of a most ingenious and studious turn, very attentive to whatever may contribute to the extension of medical knowledge, and the accuracy of whose observations may be depended upon. I mean here to subjoin what he says upon the subject, premising, 1st, That though I do not think (from every thing that I have  
been



been able to learn respecting it), that Hill's, or the Ormskirk medicine, is possessed of powers adequate to counteract the effects to be dreaded from the bite of a mad animal; yet, in a matter of so very serious and important a nature, our opinion of the inefficacy of a remedy so much extolled and depended upon, should never prevent our making use of it: for, supposing it totally useless, yet it may be properly employed without neglecting any of the more powerful means of relief; and, should the event still prove unhappy, the minds of all concerned would be better satisfied, from the reflection, that nothing likely to be of service had been omitted. 2dly, That with respect to the spontaneous hydrophobia, I saw an instance in which that disease took place and proved fatal, where not the most remote suspicion of its being caused by the bite of any animal could be entertained; nor could it be accounted for by any means, unless it could be supposed to have originated from a pretty long exposure to intense cold. But, whatever was the cause, death was the event, in two or three days after the first appearance of this symptom.

“ I missed a singular opportunity of making a rare observation on hereditary diseases, and on the communication of the canine madness. A dog covered a bitch a few hours before he became quite mad. The bitch was then, and had been kept separate from other dogs, and proved with pup ; but the master of her had neither patience nor courage to wait the event, and (unknown to me) killed her.

“ It is clear that the Ormskirk powders are not infallible ; yet as they do not hinder the use of other remedies, nor have been found in any sense noxious, I should be sorry to see them abandoned.

“ I think they were of great use here to Dr K. who, several months after the bite, had, with some pain and inflammation of the wounded part, convulsive spasms to an alarming degree, and a sensible beginning of aversion to water ; yet perfectly recovered. He was bled copiously, and bathed much ; but took no medicine, in which I should place any the least confidence, excepting the Ormskirk powder.

“ Macharini, the singer, consulted me towards the end of last summer ; and, amongst  
many

many other complaints, assured me, (and the people about her confirmed her story), that she had twice suffered a spontaneous hydrophobia accompanied with extreme thirst. Each attack lasted twenty-four hours; and the one happened in June 1784, and the other in June 1785; and, as near as she can recollect, on the same day of the month. She is very nervous, subject to strong passions, and not free from obstructions in the viscera of the lower belly."



## VIII.

*Account of an Extra-uterine Conception. Extracted from a letter written by T. Bland, M. D. of Blandford in Virginia, to W. Shippen, M. D. and professor of anatomy in the university of Pennsylvania. Communicated to Dr Duncan by Mr B. Smith Barton.*

I WAS called to give my opinion on the case of a negro woman (between thirty and forty years, as near as I could guess), who had for eighteen months been afflicted with a tumour on the right-side of the hypogastric region. She had from time to time been much troubled with, and exhausted by a diarrhœa, which only stopped for a few days to return with the greater violence. She had also severe and acute pains, for several months before I saw her, in and about the part where the tumour was. When I saw her, which was four or five months before her death, her

pulse was quick, small, and what is generally denominated hectic.

The tumour seemed fixt, and full as large as a man's two fists; and I gave it as my opinion that it was a scirrhus ovarium, which had acquired gradually that size, and formed an adhesion with the peritonæum; that it was, at the time I saw her, become ulcerated; and that, from her weak emaciated condition, an extirpation was impracticable, without danger of immediate death, for she was extremely low and emaciated. I had forgot to mention, that she informed me, she had felt a motion in it, about four, five, or six months after its first appearance; and then thought it was the motion of a child. But, to proceed:

About four months after my giving this opinion, I was informed of her death, and obtained permission to open her; when, on cutting through the parietes abdominis, I thought my prognostic confirmed; for I saw the ovarium, much enlarged, hanging to the ligament, the tumour with an unequal surface of a darkish blue, bordering on an ash-colour, and adhering to the peritonæum, colon, meso-colon,



colon, ileum, mesentery. I proceeded to dissect it from the peritonæum, when the knife plunged into a sac, from whence issued a putrid fetid matter, like what comes from the caries in the spina ventosa; and the knife struck against something hard, which I soon perceived to be the bones of a foetus; which, as near as I could judge, were those of one who had attained its fourth month. The right ovarium seemed to be lost in the tumour, and its membranes to have formed this preternatural uterus. The left ovarium and uterus were in their natural unimpregnated state, perfectly sound and entire; though a gangrene seemed to have taken place in the right ovarium and its contents, and where it formed its adhesion before death; for there seemed no remains of the carneous parts of the foetus, nor any remains of the placenta, that I could discover, through the orifice made by the knife. But all the bones were entire that I saw; particularly the radius and ulna, the tibia, and fibula, which protruded themselves; and I could feel also the cranium with a probe. I extirpated the tumour, and put it into spirits; and have since shown it to many. This



you may depend upon to be the true history of the case.

## IX.

*History of a Case in which an Epistaxis occurred vicarious to the Menstrual Discharge. By Dr Robert Hamilton physician at Ipswich.*

**M**ISS D—s, ætât. 22, the subject of this case, for these last four years has had her menses irregularly. Sometimes they do not appear for four months together; then they break forth, and continue regular for three or four periods; stop again, &c. During their interruption, at the ordinary time they should appear, she is regularly seized with an epistaxis, which continues three or four days (or about the length of time the catamenia used to flow) before it completely stops. The quantity of blood lost from her nose at these times is considerable, and creates some uneas-

finess to herself and parents. She is of a sanguine temperament; skin soft, yet not loose; hair extremely red; no marks of œdema about her ancles. She enjoys tolerable health in general, though delicate; unless a slight uneasiness she feels before her times of menstruation, which is removed either by their appearance, or by an epistaxis.

About ten days ago, on the return of these uneasy sensations, the family apothecary was sent for, who administered some rhubarb. This having operated but slightly, next day he gave a little more; in the whole, however, according to his account, not more than an ordinary dose: but it had such an effect on her the second day, that in less than eighteen hours, it seems, she had upwards of 50 stools. This great evacuation threw her into a fever, and she seemed to all about her dangerously ill; on which I was called. She is now perfectly recovered, chiefly by such medicines as obviate debility, and are in common use; therefore it is not necessary to repeat them here.

The above account, relative to her menstruation, I received on my first visit from her mother; who mentioned the epistaxis alternating,

ternating, or rather supplying menstruation, in course, in answering other questions I thought it right to put to her on the subject of her daughter's case. She gave the relation, too, without any kind of concern, or seeming to think much of it, excepting from the largeness of the loss of blood from the nose. I frequently, after this, introduced conversation that led to the subject; yet so as they might not suspect my intention, (for I was afraid of imposition, as we are very apt to receive false and imaginary accounts from patients or their friends); and have reason to rely on it as a positive fact. Let the physiologists find an explication for it.

While I am now writing, Mr Buck, a surgeon in this town, has just called on me; and, on telling him as above, he informs me of a maid-servant he had, some years ago, affected almost exactly in a similar way. He took notice of her frequently bleeding at the nose; he mentioned it to Mrs Buck, and had some thoughts of parting with her, as it frequently interrupted her business. She informed him, the girl had not been regular for some years past; and that always, at the usual period of



menstruation, she was seized with this effusion of blood. He immediately bled her at the foot, and repeated venæsection at the next period. Her menses after this returned, and continued regular, without any other means being used, excepting the immersion of her feet in warm water.

It is wonderful to observe what variety of means nature takes to restore the animal machine to its wonted functions when disordered, and to relieve herself from causes giving morbid irritation. Sometimes she opens preternatural outlets, to throw off an accumulated fluid detained in the system by some casual obstructions in one or other of its excretories. At other times, the discharge is thrown on a neighbouring organ, where it finds an exit. Thus we see the perspirable matter supplied by an increase of urine. We have read of abscesses formed in different viscera, bursting, and discharging their contents at a distant part of the body; or translated from some inaccessible part where they had formed, perhaps to some extremity, and being deposited there, within the easy reach of the surgeon's knife.

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The menfes have been fupplied by a periodical hæmoptysis, by a monthly difcharge of blood from an ulcer of the foot, a tumour of the neck, or from the end of the little finger. Befides thofe we have taken notice of here, there are on record, many other fuch anomalous cafes: And I fhall give you the following alfo as an addition to the number. I learned it while I was a ftudent under you, and enjoyed your perfonal acquaintance.

It was in the year 1779, I think, a young lady in the neighbourhood of Edinburgh, aged 18, had an ulcer of fome years ftanding on her foot, near the courfe of the faphæna major. It was large; nor was ſhe eafily prevailed on to ſhow it, through a modeſty and delicacy ſhe naturally poſſeſſed. Her mother aſſured me, that at the time her menfes ſhould have appeared, it diſcharged blood for a few days. She had no other menſtruation, and this diſcharge was periodical. She was of a very ſedentary life, and appeared to be of a ſcrophulous habit.

Though we ſhould reap little real inſtruc-

tion from cases such as the above, not being able to draw any general conclusions from them; yet, as curious, they deserve to be noted. They will, however, no more, perhaps, explain whether menstruation is to be referred to a general or partial plethora, than arguments drawn from monstrous productions of nature can be brought as proofs that such is her common course: Or, in other words, I think we ought no more to acquiesce in such arguments, either for a general or partial plethora, than we ought in an argument drawn from a child's being born without an umbilical cord, as a positive proof that the foetus is not nourished through that vessel.

*X. History.*



## X.

*History of a remarkable Case of Nostalgia affecting a native of Wales, and occurring in Britain.* By Dr Robert Hamilton physician at Ipswich.

**I**N the year 1781, while I lay in barracks at Tinmouth in the north of England, a recruit who had lately joined the regiment (named Edwards), was returned in the sick list, with a message from his captain, requesting I would take him into the hospital. He had only been a few months a soldier; was young, handsome, and well-made for the service; but a melancholy hung over his countenance, and wanness preyed on his cheeks. He complained of universal weakness, but no fixed pain; a noise in his ears, and giddiness of his head. Pulse rather slow than frequent; but small, and easily compressible. His appetite was much impaired. His tongue was

sufficiently moist, and his belly regular; yet he slept ill, and started suddenly out of it, with uneasy dreams. He had little or no thirst.

As there were little obvious symptoms of fever, I did not well know what to make of the case. I suspected he might be under an incipient typhus, and ordered what I judged necessary to obviate it. Some weeks passed with little alteration, either for better or worse, excepting that he was evidently become more meagre. He scarcely took any nourishment, yet had hitherto sat up out of bed some hours every day. At length he became indolent; seldom sat up at all; was constantly dosing, yet his sleep never so sound but he could answer when spoken to: He sighed deeply and frequently; nor could his attention be directed to any external object. Something, it would seem, hung heavy on his mind. He never had any cough; yet, since he came into the house, had wasted away considerably. Exercise was recommended, and used as far as he could be roused to take it, which was never without reluctance. He was put on a course of strengthening medicines; wine was allowed him. All proved ineffectual. His pulse had  
changed

changed with his appearance, and was now small and quick; an evident fever of the hectic kind, as it seemed, with an evening exacerbation, took place. He had now been in the hospital near three months, and was quite emaciated, and like one in the last stage of a consumption. His eyes were grown hollow; cheeks prominent; nails incurvated; adnata pellucid; and he was so weak in his limbs, that he could neither get in nor out of bed without help. Of late, also, he had night-sweats. In short, I looked on him as lost.

On making my morning visit, and inquiring, as usual, of his rest at the nurse, she happened to mention the strong notions he had got in his head, she said, of home, and of his friends. What he was able to speak was constantly on this topic. This I had never heard of before. The reason she gave for not mentioning it, was, that it appeared to her to be the common ravings of sickness and delirium. He had talked in the same style, it seems, less or more, ever since he came into the hospital.

I went immediately up to him, and introduced the subject; and, from the alacrity with which he resumed it (yet with a deep sigh, when



when he mentioned his never more being able to see his friends), I found it a theme which much affected him. He asked me, with earnestness, if I would let him go home. I pointed out to him how unfit he was, from his weakness, to undertake such a journey (he was a Welchman) till once he was better; but promised him, assuredly, without farther hesitation, that as soon as he was able he should have six weeks to go home. He revived at the very thoughts of it. At this time, however, I made a promise which I knew it was not in my power to perform, without the consent of the commanding officer, who alone can grant furloughs: but, as my hopes of his recovery were very slender, my rash promise could give me the less uneasiness; and my scheme was, to animate his hopes, and endeavour thus to take advantage of the change that his mind might undergo by it, to co-operate with me in removing, if possible, the malady.

It seems he had requested leave to visit his native place soon after he joined; but being only a recruit, and but a few months from thence, he was refused. This had hung on his spirits ever since; and from thence I now dated

dated the origin of his illness. I intreated him to take food to strengthen him for his journey; and, as soon as he was able, to go out into the open air a little every forenoon when the weather would permit, that he might be the sooner able to go home. He listened eagerly to every word I said. In short, his appetite soon mended; and I saw, in less than a week, evident signs of recovery. He was now lively, though so weak that he could not get in or out of bed without assistance; he strove to sit up; two men took him between them in the heat of the day, and placed him on a seat they had erected for him on the beach, where he had a view of the shipping, for it was on the sea-coast. In a little time he was able to walk. Every visit I paid him he resumed the subject of *the furlow*; which I persisted in promising, seeing the good effects it had already produced; and, in less than two months from the time he had received this promise, he was able to leave the hospital and go to his barrack-room.

I set myself about endeavouring, as far as in me lay, to accomplish my promise; for he paid me almost daily visits, assuring me  
he

he was able to undertake his journey, if I would allow him, for he firmly relied on my word. I was in some dilemma now how to act; yet his story was already known throughout the regiment, and the escape he had from imminent death. The deception, however, if I had dropped it here, was tenderness, and a regard for his recovery. But I went farther. I made public to all the officers the method I fell on to recover him; and told them, moreover, that if I did not succeed in obtaining him a furlow, I was sure he would relapse, as soon as he understood his expectations were to be frustrated. I won them over to my interest. The story was publicly talked of. The commanding officer was likewise acquainted with it; and the request was now made to him, which he obligingly granted.



## XI.

*Account of a Case in which a very large portion of the Lungs was protruded and strangulated, occasioned by a wound in the Thorax, which was treated successfully. By Mr Robert Bell surgeon in Cork. Communicated to Dr Duncan by Sir Thomas Bell, M. D. Dublin.*

**A** LABOURING man, on the 7th of May 1780, received a wound with a knife in the left side, nearly equidistant from the spine and sternum, which touched the superior edge of the tenth rib, and, passing obliquely upwards, penetrated the cavity of the thorax:

On visiting him early the following day, I found him very languid from loss of blood, and an amazingly large portion of the lungs protruded and strangulated, attended with great pain, and tension. This portion of the lungs, from its magnitude, could not be returned, it  
being

being five inches in length, and five and a half in circumference, when largest. I therefore immediately dilated the wound, and very largely, in hopes that by removing the stricture the alarming symptoms might subside. The inflammation, however, ran so high, that, notwithstanding my utmost attention to prevent it, the protruded part gangrened in several places, and seemed disposed entirely to mortify. On the 22d, a considerable quantity of pus began to issue from the wound; the sloughs gradually separated, and all tension was removed by the beginning of the succeeding month. To leave the poor man in so deplorable a situation was impossible: I therefore ventured to apply a ligature on the protruded part, as close to the ribs as I could; and, as it became loose, from time to time, I applied a fresh one. By these he constantly suffered very acute pain, with this remarkable circumstance (which to me, I confess, is inexplicable), that it was wholly confined to his abdomen, chiefly in the hypogastric region; and so severe on my tightening the ligature, as to occasion his screaming aloud, and pressing his hand on that part. On the 14th, he

bled considerably from the place where the ligature was applied, not less than a pound, as nearly as I could guess; and on the 15th, about four ounces: after which there was no hemorrhagy of any consequence. On the 19th, the whole protruded part separated, with little loss of blood; and weighed no less than seven ounces and a half, though much diminished in bulk. During the time of his confinement he was kept as free from motion as possible, necessarily on his back, in order to support the part more effectually. On the 5th of July the wound was healed; and I saw him in a short time after, when he appeared not only in perfect health, but informed me that he found no inconvenience whatsoever from his late dangerous situation; though he cannot, as formerly, undertake severe labour, such as mowing; but he can do common work as well as ever. It appears worthy of observation, and not a little remarkable, that he had no cough or oppression, neither during the whole time of his confinement, nor after it.

At the reduction of Quebec under General Wolfe, we had in the military hospital at  
Point



Point Levi, a grenadier of the 35th regiment of foot, who had a portion of the spleen protruded through a wound. This was successfully removed by incision, of which there have been other instances: but not knowing of any cases where part of the lungs was protruded and removed, I apprehended that this case may be a useful precedent; and as such transmit it to you, to whom the medical world is much indebted for the publication of your valuable and very useful Commentaries.

XII. *The*

## XII.

*The History of a singular affection of the Liver, which prevailed epidemically in some parts of the West Indies.* By Mr C. Chisholm surgeon at St George's, Grenada.

THE diseases of the West Indies may be in general divided into the putrid and inflammatory; the first prevailing from May till towards the beginning of November; the latter during the months of November, December, January, February, March, and April; but more universally from the end of December till the beginning of April. Their appearance and degree of prevalence depend so much on the state of the weather during these periods, that a variation in the common course from warm moisture to the changeable weather of the later months of winter and those of spring, is attended with a proportional change in the appearance, nature, and prevalence of

the diseases. In the month of November inflammatory symptoms begin to appear, blended with those of putrescence; such as coughs, pleuritic stitches, rheumatic pains, &c. In January, February, and March, during which the nights, mornings, and evenings, are cold, and the days warm, the thermometer changing generally from 72 to 84, violent pleurifies, coughs, and rheumatisms, prevail very much, and seldom yield, particularly the former, till very large evacuations of blood are made. This state of weather, and the diseases incident to it, are much more evident on the north and north-east sides of the islands than to leeward; and seem to arise from their more direct exposure to the piercing northerly winds, which constantly blow during the winter and vernal months.

The hepatitis seems to be the only exception to this division of the West India diseases. This disease, though evidently a violent inflammation of the liver, appears as well in July or August as January or February, from a cause which seems so obscure as to elude investigation. It is well known, that of all the viscera the liver is most subject to disease in warm climates.

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The inflammation of this viscus has for twelve or fourteen years past frequently appeared in the West India islands; and the later settled islands, Grenada and Dominica in particular, have been most subject to it: But till very lately it has not assumed the appearance of an epidemic, and differed from its common origin, progress, and termination, by putting on symptoms and producing changes in the organ it is peculiar to; hitherto, I believe, unobserved.

This new affection of the liver began to appear on the windward-side of the island of Grenada about the end of October, when an uncommon changeableness in the state of the weather prevailed. The month of September was remarkable for the prodigious falls of rain and great height of the thermometer, which succeeded the equally surprising drought of the preceding month. The months of October and November were not less remarkable for the quantity of rain which fell; but the height of the mercury in the thermometer, and consequently the degree of heat and cold, was extremely observable. December was not so wet, nor the thermometer so variable; but northerly winds began to blow,

which, attended with heavy dews, during the night especially, occasioned a piercing coldness in the air. The same state of the weather, with only more boisterous northerly winds, and a greater chillness in the air, continued throughout the months of January and February. The month of March, down to this day, has been dry, cold in the night and morning, warm during the day, and generally calm.

Whether this surprising change, from excessive drought to excessive moisture, from great and uniform heat to a considerable degree of cold, was productive of the disease to be hereafter described, I shall not determine; but, having no other data to infer from, I must rest satisfied with attributing it to that as its cause: On further observation the investigation of this obscure point must depend. It is certain, however, that the disease did not become very frequent till towards the middle of January, when the degree of cold was the greatest; that it then assumed those appearances, which at that time and since have rendered it so extremely dangerous; and that it was chiefly prevalent in the districts of the island called Scantein and Marquis,



quies, which are by far the most exposed to the influence of the chilling northerly winds. It is to be observed, that during the above period, accidental hurts, particularly on the region of the liver or left-side, seemed to be occasional causes of the disease; at any rate the usual symptoms were much exasperated by them.

Although people of all colours, sexes, and ages, were subject to the disease I am about to describe, yet the blacks and young people from the age of eight to twenty-five years were most liable to it. This distinction appears to have chiefly arisen from the greater exposure of the negroes to the cold dews of the night, and their habitations more readily admitting the cold northerly winds which generally blow at that time. It is also remarkable, that it seemed to possess a considerable degree of contagion; for on the Hermitage estate, and river Antoine in particular, I have seen whole families receive the infection from communicating with one of the parents who had been some time before affected with the disease. On the river Antoine the contagious nature of the disease appeared remarkably in



two instances. The first was in the case of two cooper negroes, who had been hired to work on the estate: Their masters, who lived at Grenville Bay, having occasion for their labour, recalled them: During the latter part of their stay on the estate, they lived with the housekeeper, who was then labouring under a fatal attack of the disease. Very soon after their return to Grenville Bay, they were both violently seized, and with the utmost difficulty escaped. The other is the case of the house-negroes: From the same woman, all the mulatto and negro-servants received the infection; and many of the field-negroes, who had occasion to visit the house during her illness, were soon after dangerously afflicted with it. When patients, in a state of convalescence, were unnecessarily continued in the sick hospital, they were much more liable to returns of the disease, than others who had been sent to their huts.

The disease began, in general, with a considerable degree of headach, a pain at the pit of the stomach, or sometimes about the extremity of the cartilago xiphoides, some degree of languor and lassitude, and a considerable sense of tightness and  
oppress-

oppression at the præcordia, with difficult respiration. The skin was dry, constricted, and cool; the tongue moist and foul; the belly natural, and the urine freely discharged. There was no thirst, nor much anorexia; the pulse was soft, about 70 or 80 in a minute, and of a natural fulness. But the state of the patient, at the beginning, sometimes differed from this; the pulse in particular being hard and frequent, and the skin arid and hot: A considerable tumefaction of the abdomen was also observed in some, chiefly at the umbilical region. The pain too, in some cases, seemed, even in the incipient stage, to mark the nature and seat of the disease more clearly. When this happens, the patient often complains of it sometimes in both scapulæ, but oftener in the right; or stretching across the abdomen a little above the navel; or fixed in the right hypochondrium; and extending to the shoulder of the same side; or in both hypochondria and the pit of the stomach at the same time; or stretching from the umbilicus to the spine, and attended with very laborious breathing. In general, however, it was very remarkable, that when the pain was fixed, it



was felt in the left side, under the lower of the false ribs.

In about two days the headach increased much, but without vertigo; the pain at the pit of the stomach became more excruciating; the patient felt symptoms at the same time similar to those of an ague fit, shivering and shaking. Soon after, the skin communicated, on gentle pressure, a sensation of cold; but when felt for some time, and more strongly pressed, an intense penetrating heat; whilst its surface continued excessively arid and rugose. The tongue was now covered with a thick moist fur, of a purplish colour towards the edges, and with concretions in the middle: A copper colour began to appear on the upper part of the cheeks, the nose, and eye-brows, out of which large drops of clammy sweat frequently issued; whilst a greasy moisture was at the same time diffused over the rest of the face. The pulse, from being only 80 in a minute, quickened to 120, and in some cases to 144, and was hard and contracted: When the headach was much complained of, without the presence of any pain, the pulse was harder and quicker; on the contrary, if headach and pain in either side

were



were felt at the same time, the pulse did not seem to be so much affected : The skin too, in this case, was less hot and arid. When headach was the only pain complained of, and bloodletting not freely used, a pain at the pit of the stomach, or in the right or left side, sooner or later supervened.

In many cases, at this period of the disease, the patients complained of a dry cough, or rather a sudden quick expiration, proceeding seemingly from a violent compression of their lungs. And indeed, at this time, it was not unfrequent for the patients to describe a feeling in the lower part of the thorax, similar to that of a heavy weight pressing upon their lungs, and almost suffocating them. About the sixth day, and sometimes earlier, if the patient had not the good fortune to escape by means of evacuations, to be hereafter mentioned, the pulse suddenly sunk, so as to become almost imperceptible ; the greasiness and coppery colour of the face increased very considerably ; a glassiness appeared on the eyes ; a general disagreeable coldness of the skin was perceived, with frequently a partial clamminess on its surface ; a great increase of the weight at the

præcordia, a sense of stricture in the pharynx, and an excessively difficult deglutition came on; all which were soon succeeded by coma and death.

In the worst cases of the disease the brain never appeared affected, the mind never being in the smallest degree disturbed. Out of about two hundred patients, thirty died; of these, three died on the 3d day, nine on the 5th, twelve on the 7th, and six on the 11th: Indeed the progress of this dreadful disease was such, that when the patients survived the 7th day, it seemed to be entirely owing to bleeding. The only thing like a critical discharge that could be observed, was a purging, which frequently came on spontaneously, a considerable time after the use of mercury had been laid aside. This purging, though attended with griping, tenesmus, and nausea, and consequently extremely painful, seemed to abate the violence of the symptoms considerably; and, in a few cases, evidently effected a cure.

The diagnostic symptoms of this disease were, as must be perceived from its history, extremely uncertain; for, if a pain in the  
right



right side and shoulder did not point out its nature and seat, the knowledge of it was directed by the pain at the pit of the stomach, when accompanied by oppression and tightness at the præcordia, the coppery colour of the cheeks, forehead, and nose, with a greasy moisture on the surface of the face, and the sudden supervention of the quick hard pulse about the 3d day. Upon the whole, it was repeated observation and dissections alone, which enabled us to detect the peculiar features of this disease.

The prognostics were more certain. If the blood, when drawn, continued very fizy, and the mercury did not affect the salivary glands soon, the recovery of the patient became extremely doubtful: But on the contrary, if the blood became less inflammatory, and the mercury affected the mouth in an early stage of the disease, the patient might be pronounced out of danger. Yet sometimes the appearance of the blood was very deceitful. I have known the first blood drawn covered with a thick inflammatory crust, the second and third red and fluid, and the fourth again threw up a thicker crust than the first. If the appearance



ance of the second and third was trusted, the patient inevitably died. When we had recourse to these copious evacuations, if the respiration became free and full, and the pains moderated, we could with most certainty prognosticate his recovery.

In all the cases which terminated fatally, the liver, on dissection, was found astonishingly enlarged. On its surface, particularly the convex side, an irregular intermixture of red, purplish, and tallow-coloured spots was dispersed, exhibiting a clouded appearance; yet the peritonæum covering it adhered as closely as in a healthy state, to the substance, and when separated, had no unnatural appearance, being perfectly transparent. The texture of the parenchyma, though so much enlarged as in eight cases out of ten to occupy both hypochondria and the epigastrium, was otherwise in a natural state. It was not soft; it could not be easily divided without the knife; nor was there in any part of it the smallest appearance of suppuration. The diameters of all its vessels were proportionally enlarged, but perfectly empty. The intestines, excepting in one case, the stomach, the spleen, the pancreas,

creas, the lungs, and the heart, were found and in a healthy state. The brain was examined, in one case only, and there it was in a healthy state. The duodenum, the jejunum, and ileum, in the case alluded to, had several large livid blotches on their surface, which at first were thought gangrenous; but, on cutting into them, were found to be occasioned by extravasations of blood between the coats of the intestines, which, on pressure, issued in a coagulated state.

In two cases, the vessels of the gall-bladder were found much distended with blood, as were likewise those of the diaphragm. In one case there was an adhesion of the right lobe of the liver to the right side, altho' the pain had been felt in the left; which was the only symptom, excepting violent headach, the patient complained of. In another case, where the only symptoms were headach and pain in the left side, on dissection the liver as usual was found much enlarged, occupying the right and left hypochondrium and epigastrium, and there was a recent adhesion of the edge of the left lobe to the false ribs immediately opposite to the seat of the pain. The liver, however, did not always exhibit



exhibit, on dissection, the motly appearance I have here described.

I have already observed, that during the convalescent state, the patients were exceedingly liable to relapses. Indeed, during this state, if they were guilty of the smallest irregularity, or exposed themselves to cold, the disorder returned with more violence than before; and the excessive debility of the habit preventing the rigorous use of the former means of cure, it proved fatal in twenty-four or forty-eight hours. A remarkable instance of this occurred during my residence at the Hermitage. A negro wench, about fifteen years of age, had some time before been violently afflicted with the disease; and the mercury acting powerfully on the salivary glands, the symptoms disappeared, and she continued in a convalescent state for a fortnight. Towards the end of this period she was removed from the hospital, and imprudently exposed to a much cooler air than she had been accustomed to. The pain at the pit of the stomach, headach, and quick small contracted pulse, very soon after supervened; and in thirty hours she died. Her liver was

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found



found to occupy both hypochondria and the epigastrium, but the whole of its surface had a natural colour. Every other part of her body was in a perfectly sound state.

In two cases, the lungs were affected. In one of them, where a violent bruise on the left side seemed to be the occasional cause, and where the progress of the disease was so rapid as to terminate fatally in three days, the following were the appearances on dissection: There was observed a very great enlargement of the liver, with a considerable degree of hardness; but the colour was not very unnatural, further than being more red than common. A quantity of purulent matter was concealed under its left lobe, but no abscess could be discovered on cutting into it. This lobe adhered to the peritonæum all along the false ribs and diaphragm. The stomach and other viscera had a natural appearance, only distended with air. The lungs, the left lobe in particular, were in a very inflamed turgid state; but no collection of either serous or purulent matter could be found. Upon the strictest examination, no mark from whence the purulent matter issued could be discovered.

When

When this disorder first became epidemic, the quickness of its progress, and its fatal tendency, very much surprised the medical gentlemen who attended the estates it chiefly appeared on ; the irregularity of its symptoms prevented the detection of its nature and seat, and consequently led only to the use of the common means of cure used in the febrile diseases to which the negroes are subject. The cure was first attempted by bleeding once or twice, purging gently, and giving a medicine composed of nitre and camphor. These, however, proving ineffectual, and observing that the disease was in a considerable degree contagious, it was thought to partake more of the putrid than inflammatory diathesis ; and therefore bark and various cordials, with blisters, and the nitrous and camphorated powders, were given in very large quantities. But these were soon found rather to exasperate the symptoms of the disease than abate their violence.

At length, about the end of January, when the disease became infinitely more alarming, having found there was an absolute necessity for bleeding largely, without delay, in order



order to preserve life ; the following method of cure was adopted, which seldom failed, not only in young and robust people, but even in those of a more advanced age, provided the sick were seen before the end of the third day. The patient was immediately bled, until a faintness came on, or the pains abated ; neither of which happened till twelve, twenty, thirty, or even forty ounces of blood, were in some cases taken away. After this liberal bleeding, a blister was applied to the pained part ; or if there was no particular pain between the shoulders, and if the patient was costive ; about an ounce of salts was given to him. After the operation of these, he was desired to take, every two hours, a powder composed of three parts of nitre and one of camphor, with a very small proportion of tartar emetic. In the evening, if the first blood was fizy, the pulse still quick and hard, and little abatement of the pains took place, the bleeding was repeated in the same liberal manner. In general, the frequency of the pulse alone determined the frequency of bleeding, and the quantity to be drawn ; for having discovered the deceitfulness of the blood, we did not



think it prudent to trust much to it. In this manner, in the course of three or four days, I have known from forty ounces to ten pounds of blood drawn. But we did not find it eligible to trust to this evacuation alone. After the third bleeding, we gave from two to seven grains of calomel made into a pill, with one-fourth of a grain or a whole grain of opium, three times in the day. This practice, continued for two days, brought on a copious salivation. When this was effected, we considered the patient out of all danger; and gave him nothing afterwards but a little physic, or some antitypaltic medicine to moderate the spitting. In weakly patients, however, it was necessary, during the salivation, to support their strength with wine and various cordials. It is astonishing how readily cases of the most dangerous tendency were cured by this method in a few days: And it is no less remarkable how quickly the sick recovered their usual health and strength, notwithstanding the great loss of blood they sustained; while many who had been bled more sparingly, continued in a languid infirm state for months. I have formerly re-

marked,

marked, that a purging was sometimes brought on by the calomel, and at other times came on spontaneously, seeming to be a critical discharge. In whatever way this evacuation came on, we always found it necessary, during its continuance, to support the patient's strength with soups, panada, wine, and other cordials; and to moderate it, when too severe, by repeated doses of laudanum, with ipecacuanha, or a powder composed of two-thirds of the pulv. è bol. cum opio, and one-third of ipecacuanha, washed down with a glass of water in which a little laudanum and syrup had been mixed. It is remarkable, that all those patients on whom mercury had no evident effect, lingered a considerable length of time; recovering chiefly by the free use of bark and wine, or else died on the 7th or 11th day, although bleeding had been liberally used: And in all who died, mercury had not been given, or continued obstinately inactive.

In the last stage of the disease, very little could be done. Blisters were applied to the arms and thighs, and sinapisms to the ankles: Cloths wrung out of boiling-water were laid upon the stomach, to relieve the load which

at this period was always felt there. Large doses of camphor and laudanum were given with the same intention, and as cordials, together with bark and wine. These, in a few cases, recovered the patient ; but, in general, were ineffectual.

Upon the whole, bleeding to a degree exceeding all common bounds, and promoting a copious salivation as speedily as possible, were the only means of cure in which we put confidence ; and I can safely aver, that in nineteen cases out of twenty, I have not found them fail, providing they were employed early enough.

S E C T.



## S E C T. III.

## MEDICAL NEWS.

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**T**H E American philosophical society held at Philadelphia, have lately resumed their labours, which were for some time interrupted by the peculiar circumstances of America; and have published a second volume containing many excellent papers, some of them from authors of the first eminence in philosophy, particularly the illustrious Franklin. To this volume they have prefixed the laws and regulations of the society, a charter of incorporation by the representatives of the freemen of the common-

wealth of Penfylvania, a lift of the present officers of the fociety, a lift of the members elected fince the publication of the firft volume of their Tranfactions in 1771, and extracts from their minutes refpecting a donation by Mr J. H. de Magellan of London, and the eftablifhment of an annual prize-medal.

As we prefume it may not be difagreeable to many of our readers to be acquainted with the regulations which they have eftablifhed refpecting their prize-medal, we fhall here prefent them with this part of the introduction.

“ January 1786. Mr J. H. de Magellan of London, having, in a letter dated the 17th of September laft, and communicated to the fociety by Mr Vaughan, one of the vice-presidents, made an offer to the fociety of *two hundred guineas*, to be vefted in a permanent fund, that the intereft arifing therefrom may be difpofed of in annual premiums, to the authors of the beft discoveries or moft ufeul improvements relating to navigation, or to natural philofophy, mere natural hiftory only excepted :

excepted : And the society having most thankfully accepted the generous offer, appointed a committee to frame rules and conditions for the disposition of the proposed premiums, agreeable to the intention of the donor, expressed in his letter, but more precise in the terms ; which being done, and approved of by the society, were immediately transmitted in a letter to Mr Magellan, for his confirmation or amendment. They are as follow, viz.

“ 1. The candidate shall send his discovery, invention, or improvement, addressed to the president or a vice-president of the society, free of postage or other charges ; and shall distinguish his performance by some motto, device, or signature, at his pleasure. Together with his discovery, invention, or improvement, he shall also send a sealed letter, containing the same motto, device, or signature, and subscribed with the real name and place of residence of the author.

“ 2. Persons of any nation, sect, or denomination whatever, shall be admitted as candidates for this premium.

“ 3. No discovery, invention, or improvement,



ment, shall be intitled to this premium, which hath been already published, or for which the author hath been publicly rewarded elsewhere.

“ 4. The candidate shall communicate his discovery, invention, or improvement, either in the English, French, German, or Latin language.

“ 5. All such communications shall be publicly read or exhibited to the society, at some stated meeting, not less than one month previous to the day of adjudication ; and shall at all times be open to the inspection of such members as shall desire it. But no member shall carry home with him the communication, description, or model, except the officer to whom it shall be intrusted ; nor shall such officer part with the same out of his custody to any but the judges, who may demand it for consideration.

“ 6. The twelve counsellors, together with the other officers annually elected, according to the charter and laws of the society, shall be judges of the merits of the several communications, and award the premium. Which adjudication shall be determined by a majority

rity of judges met ; provided that such majority be not less than seven concurring votes.

“ 7. And for this purpose the counsellors and other officers, or at least seven of them, shall meet on the second Monday in December, in every year, to form their judgment, and award their premium. After due consideration had, a vote shall first be taken on this question, viz. “ Whether any of the communications then under inspection, are worthy of the proposed premium ? ” If this shall be determined in the *negative*, the whole business shall be deferred till another year ; but if in the *affirmative*, the judges shall then proceed to determine, by vote, the discovery, invention, or improvement, most useful and worthy. And that discovery, invention, or improvement, which shall be found to have the greatest number of concurring votes (being not less than seven) in its favour, shall be successful. Whereupon a certificate in writing shall be forthwith drawn of this adjudication, and signed by those who voted for the crowned subject ; and then, *and not till then*, the sealed letter accompanying the crowned performance shall be opened, and the name of

of

of the author announced ; Which certificate shall be presented to the society at their next stated meeting, and delivered to the secretary to be entered on record, in a bound book provided for this purpose.

“ 8. A full account of the crowned subject shall be published by the society, as soon as may be, after the adjudication, either in a separate publication, or in the next succeeding volume of their Transactions, or in both.

“ 9. The unsuccessful performances shall lie over for consideration, and remain as candidates for the premium for *five* succeeding years next after their presentment ; unless the author or authors shall think fit to withdraw them or any of them. And the society shall publish annually an abstract of the titles, object, or subject-matter, of the communications so under consideration ; such only excepted as the counsellors and other officers shall, by vote as aforesaid, have determined not worthy of public notice.

“ 10. No counsellor or officer who is a candidate, shall sit in judgment, or give his vote.

“ 11. The letters containing the names of authors whose performances shall be rejected,

or



or shall be found unsuccessful after a trial of five years, shall be burnt without breaking the seals.

“ 12. In case there should be a failure, in any year, of any communication worthy of the proposed premium, there will then be two premiums awarded in the next year: But no accumulation of premiums shall intitle an author to more than one premium for any one discovery, invention, or improvement.

“ 13. The premium shall consist of an oval plate of solid standard gold, of the value of *ten guineas*. On one side thereof shall be neatly engraved the following motto, ——— together with these words, *The donation of ——— of London, established in the year 1786*. And on the other side of the plate shall be engraved these words, *Awarded by the A. P. S. to ——— ——— for his discovery of ——— ——— A. D. 17—*. ——— *President*. And the seal of the society shall be annexed to the said golden plate, by a ribbon passing through a small hole near the lower edge thereof.”

The

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The following extracts from a letter written by Mr William Jones surgeon at Birmingham to Dr Duncan, and dated 30th September 1786, gives some account of two cases related in a former section of this volume. This, we presume, as well as some other particulars which it contains, will not be disagreeable to our readers.

“ I HAVE the pleasure to inform you, that my patient (Miss P——) who was insane, remains perfectly well ; and must add, that she was cured in one-sixth of the time that her sister was, whom I mentioned as having been placed in a private mad-house.

“ My patient (Richard Gratton) who recovered of hæmoptysis, remains in good health.

“ I have had the pleasure of removing the latter complaint by the same remedy, in another person (a woman); and, on my mentioning it to Dr Withering, he desired me to communicate it to you. However, I have no reason

son to expect a permanent cure in this latter case ; as she neglects a cough, which has now been troublesome for many months, and which I found easy to relieve immediately after the removal of the hæmoptysis.

“ It would be superfluous again to enter into a detail of symptoms of a disease so well known ; I shall therefore only observe, that Mrs S—— of this town had had a violent cough during the greatest part of last winter ; attended, when I first saw her, with an alarming degree of hæmoptysis, plethora, the usual symptoms of fever, and frequent profuse cold sweats.

“ She was thus circumstanced on the evening of May 26th 1786, when I took away some blood ; and, as she was costive, prescribed an opening mixture to be taken at stated intervals, till her bowels were opened.

“ The next day, I directed a grain of the fox-glove in pills, to be taken every morning and night.

“ Four doses were sufficient to remove the hæmoptysis. And she recovered, in a few days, to the degree of health she had before its appearance.

Other



“ Other instances of similar success have occurred, both to my friend Mr Mynors and myself, and that without the use of venæsection, in certain reduced, scrophulous, and leucophlegmatic habits.

“ In the attendant symptoms of hæmoptysis, such as quick circulation and fever, venæsection being premised in plethoric cases, the fox-glove occasionally administered, may be readily managed, so as soon to bring down the most rapid pulse to its natural standard, without occasioning any violent symptom whatever. In consequence of these properties, it will perhaps be found capable of preventing that necessity for repetitions of bleeding which has frequently occurred in this complaint when urgent.

“ When a student in London, I tried several ways of taking notes of medical clinical cases; but was never satisfied with any form I could invent. I had, by a good chance, an opportunity of seeing that published in your syllabus, which I very much admired, and adopted with the most complete satisfaction; but as I was still in want of a method suited to surgical cases, I made use of such parts of  
yours

yours as were necessary, and adapted the rest according to my own ideas. The plan has been tried very often, by others as well as myself; and copies of it were put into the hands of several gentlemen, who were my fellow-students at the time. I have long wished to communicate it to you. If it meet with your approbation, and should be suited to your plan, I shall be glad to see it in print, in hopes that it may be useful to others.

“The general heads to be followed in drawing up the histories of chirurgical cases.

“A. Name of the patient, and period of admission into the hospital.

“I. The condition of the patient.

*a.* Age.

*b.* Sex.

*c.* Temperament.

*d.* Occupation, or condition in life.

“II. An account of the progress of the disease, or of the effects of the hurt.

*a.* The period of the hurt, or the commencement of the disease.

*b.* The nature of the hurt, or the manner of the commencement of the disease.

III. The

“ III. The state of the disease at the time of taking the history, or at the time of admission.

- a.* Evident symptoms.
- b.* Feelings of the patient.
- c.* State of the principal functions.
  - 1. Pulse.
  - 2. Heat.
  - 3. Respiration.
  - 4. Excretions.

“ IV. An account of the treatment.

- a.* Internal remedies.
- b.* External remedies.
- c.* Change of symptoms, and consequent treatment.

“ V. An account of operations.

- a.* Symptoms indicating the necessity of them.
- b.* Period when the operation is performed.
- c.* Mode of performing the operation.
- d.* Particular instruments used.
- e.* Means used for obviating symptomatic affections, &c. in consequence of the operation.
- f.* Symptoms after the operation.
- g.* Treatment of such symptoms.
- h.* Treatment to the final event.

“ VI. An account of the dissection of morbid cases.

- a.* Preternatural appearances.”



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The following account of a medicine of an acid quality, and said to be collected from the air in some parts of India, which is used by the natives against bilious complaints, was communicated to Dr Duñcan by Mr Brown late surgeon to his Majesty's sloop of war the *Cygnet*.

“ BETWEEN the 13th and 16th of August 1785, his Majesty's sloop the *Cygnet* lay off Mafulipatam, on the coast of Coromandel in the East Indies, in latitude 16. 8. north, and longitude 81. 2. east from London. The foundings of this place, for a great distance, are shallow. The land, for some way back, is low and flat; and is less refreshed by sea and land breezes, than those places on that coast which are higher situated. There are many swampy creeks in its neighbourhood, which, at the end of the dry season, have not water sufficient to cover the mud; and, on account of the smell, it is disagreeable to pass

near them. The earth there abounds with nitre and some sea-salt. When we were at this place, Mr Morad, one of the most wealthy as well as most respectable of the Armenian merchants, whose wife had been in labour for four days of her first child, sent for me, as Mr Sinclair surgeon to the settlement was at that time absent. I found I was too late to be of any material service to my patient. I desired, however, that she might have a cordial. Upon this a great variety both of English and French cordials, which they had in the house, were brought to me. Most of these I knew. But there was among them a bottle which I did not know, and Mr Morad seemed to be very partial. He told me, that his wife was very subject to bile; and that this medicine had been of great use to her, and to others troubled with that complaint: And that she had wished much for it, but in her present circumstances they durst not indulge her without advice.

These circumstances led me afterwards to make particular inquiry respecting it. I found it by the taste to be a very strong pleasant acid. He said, he had it from a very intimate

mate friend of his who resided at Gundore, a village eight or nine miles back; that the dew or fogs which fell at that place in the months of September and October were very heavy; and that his friend collected this fluid at that time by spreading a piece of fine muslin over what they call *gram*, which is a species of the pea, in the evening: That next morning the dew was wrenched from the cloth, and put into a bottle, without any addition, and that this was the fluid he had presented to me; that he had a small bottle of it given him every year by his friend; and he added, that if I wanted any farther information, I might easily obtain it from the old gentleman himself, who was at that time in his house. Upon being introduced to him, he informed me, that he had lived at Gundore for upwards of forty years as a manufacturer of snuff; and that he annually collected some of this fluid, which he gave to his friends, as at that season and place bilious disorders, agues, and fevers, were very frequent; that if given in proper time, it was a cure for these; that he never kept it a secret; that at the time mentioned any one might collect it; and that he ascribed its acid



taste to somewhat which escaped from the gram.

At Masulipatam the English have very little intercourse, but by way of trade, with the Armenians. I found the Portuguese to be much more familiar, and better acquainted in the Armenian families; which probably arises from two reasons: The Portuguese understand the language of the country; and, though the Armenians are of the Greek church, yet in this place they join the Portuguese in worship.

A Portuguese surgeon, to whom I was introduced, and who was an assistant at the English hospital, corroborated the above account. He said, he had often heard of this fluid; and that a friend of his, a Portuguese gentleman, had from curiosity tried the experiment last season of collecting some of it. He introduced me to this gentleman; who differed from the Armenian only in this particular, that it was immaterial upon what the cloth was spread, provided it was exposed to the fog. He gave me a small phial of the fluid, which I found to be of the very same quality with the Armenian's. Both these  
gentle-

gentlemen offered to accommodate me in their houses at Gundore, that I might collect the fluid myself. But we did not stay upon the coast till the season arrived."

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Dr Thomas Clarke, superintendant of the botanical garden in the island of Jamaica, in a letter to Dr Duncan, gives the following account of the introduction of several valuable articles into that island.

"SOME of the ships captured during the late war, by our preserver Lord Rodney, have increased greatly the stock of exotics in our garden: And my catalogue now boasts the cinnamon, camphor, mango, mangostan, sago, gum arabic, grains of paradise, lechce, variety of true ebonies and cottons, sarsaparilla, vanilla, cochineal cactus, and cheremoya, with a variety of other curious and ornamental plants, too long for a transatlantic letter.

Are you a Linnean? If so, rejoice; for I, though none, have discovered a plant with a cyathiform stigma, which shuts up after the antheræ burst, including a quantity of farina. This is not all, I have called it *Duncania*."

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Dr Robert Hamilton physician at Ipswich, in a letter to Dr Duncan, gives the following account of some circumstances respecting the cynanche parotidea, as it lately appeared in that neighbourhood.

"WE have lately, in this neighbourhood, had the cynanche parotidea epidemic among us; and what is curious, it appeared just seven years ago epidemical also in the same place, that is, on the sea-coast along the Suffolk-side of the river Orwell near Landguard fort, a few miles from Harwich. The testicle, here, often swelled. Neither age nor sex was exempted. None died. In some cases, one breast



breast only in the female swelled. In the male, the right testicle almost constantly: Seldom the left; nay, never in this epidemic, excepting in one patient, whose right one was almost obliterated from a hurt in infancy."

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In our last volume we gave an account of the intended plan of new-modelling the medical faculty in the university of Dublin, and of the advertisement which had been published, fixing the election of professors to take place on the 21st of March 1786. On that occasion the electors made choice of the following gentlemen to fill the different chairs which were vacant.

Dr Edward Brereton to the professorship of the practice of medicine.

Dr Stephen Dickson to that of the institutes of medicine. And,

Dr Edmund Cullen to that of the materia medica and pharmacy.

From the footing on which these gentlemen are appointed, the medical professorships at Dublin can no longer be merely nominal ; and it is to be hoped, that by this appointment, the objects which the legislature of Ireland had in view will be fully answered.

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The following extract of a letter on the use of sulphur-water in gouty cases, was some time ago communicated to a lady of high rank in Edinburgh, by a friend of hers in England. Having thus fallen into the hands of many gouty people at this place, the remedy has been a good deal employed here ; and several of those who have used it, think they have derived very great benefit from it. We presume, therefore, that it may not be unacceptable to our readers.

“ ABOUT ten years ago, when at the age of forty-six, I was attacked with a slight fit of  
gout

gout in my right hand. The year after, in the month of December, I had a more severe attack in both my hands, and in both my feet; and I was laid up for ten weeks. At that season of the year the gout constantly returned, and with increasing violence; so that the last fit, which began in December 1783, lasted me five months: And for much the greater part of that time I had no use of my hands, feet, or knees.

“ During that fit, a gentleman whom I had not seen for several years, and who I indeed concluded had fallen a martyr to gout, called upon me; and, to my astonishment, appeared as healthy a man as any in England. He informed me, that he had been thus recovered for three years; and that the sole purpose of his visit was to communicate to me his remedy, which was brimstone-water. I had the pleasure of seeing him again last week, and he still continues to enjoy perfect health.

“ At his first visit he informed me, that a gentleman of his acquaintance, who had been so far a cripple as to be confined to his house for some years, and who was covered with chalk-stones, was now, by the regular and  
con-



tinued use of the brimstone-water, able to walk and ride freely ; and that the chalk-stones had in a great measure subsided.

“ But, to return to my own case : In the month of May 1784, I began the brimstone-water, after having consulted many physicians on the subject ; who all agreed in saying, that it could not do any harm. I continued it, without omitting one day, for twelve months. During that time, and in cold weather, I had some slight mementos of the gout ; which, however, never confined me, or prevented me from using exercise, which I did very freely. Upon the approach of the warm weather, viz. about the beginning of June, I thought I might venture to leave off the water for a few months. I accordingly did so : But I have begun it again, and will continue it till next summer.

“ When I first began the water, I was sensible that it promoted urine and perspiration, and induced rather a lax habit. After I had used it three or four months, a very copious discharge came on under my arms, in so much as frequently to render it necessary for me to put on clean linen a second time in the day ;

and this continued full three months. During all that time I was in perfect health and good spirits, and have still the happiness to continue so.

“ It is proper I should observe, that I never made any change in my method of living. Being now, as I flatter myself, recovered from so horrid a disorder, and having stated every thing I can recollect upon the subject, I trust that others who try this simple and innocent remedy, will find from it as much success as I have done.

“ The brimstone-water for the gout is prepared in the following manner: Let one pound of stone or roll sulphur, finely powdered, be put into an earthen or stone jar, and pour upon it one gallon of boiling-water. Let it stand four days, and let the brimstone be well stirred up three or four times a-day. At the end of the fourth day, draw off the water fine for use, and drink half a pint every morning, fasting, an hour at least before breakfast. The jar should be kept close stopped, when you are not stirring the brimstone.

Among

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Among the many advantages which the Royal Infirmary at Edinburgh affords to attentive students as a school of medicine, the establishment of clinical lectures, where cases falling immediately under the inspection of the student become the subject of remark, may justly be considered as none of the least considerable. Hitherto, however, these lectures have been almost entirely confined to medical cases: But, at the commencement of the present winter-session, a course of clinical lectures on the most important cases which occur in the surgeon's ward, was begun by Mr James Ruffel, one of the members of the Royal College of Surgeons, and of the Royal Society of Edinburgh. These lectures have met with high approbation; and will, we are persuaded, be continued with such industry and ability on the part of the lecturer, as to afford important instruction to the attentive student.

We



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We mentioned in our last volume, that the Harveian society of Edinburgh had proposed as the subject of their prize-dissertation for 1785, an Experimental Inquiry concerning the nature and properties of Opium, concerning its different constituent parts, and their effects on the human system. After mature consideration of the different dissertations on this subject, which were transmitted to the secretaries, it was the unanimous opinion of the judges, that the preference was due to a dissertation to which was prefixed the following motto:

*Phœbus volentem prælia me loqui  
Victas et urbes increpuit lyra,  
Ne parva Tyrrhenum per æquor  
Vela darem.*

And upon opening the sealed letter which accompanied this dissertation, it was found to be written by Mr John Leigh from Virginia.

To

To him, therefore, the usual premium was publicly delivered at the anniversary meeting of the society on the 12th of April 1786.

This dissertation is now published. Those, therefore, who wish particularly to examine the experiments which it contains, may have ready access to it. We may only observe, that it seems to have been the invariable object of the author, through the whole, not to search for evidence of any particular theory, but to discover and investigate truth. He has been at much pains, not only to ascertain the different constituent parts of opium, but to determine their exact proportions, and their peculiar effects. He has found, that while the resinous part of opium seldom exceeds a sixth, the gummy in general amounts to nearly one-half of the mass: And on comparing the effects of these two parts, he has found, that while the resinous, not unfrequently, somewhat accelerates the pulse in a short time after it has been exhibited, the gummy part always renders it slower.

After extracting the essential oil of opium by distillation, he has found that the resinous part of what remained has not any effect as

an opiate ; but that the gummy part is still capable, both of producing sleep and slowness of pulse. The salt of opium, which could not be obtained without the aid of the nitrous acid, he found to resemble the saline matter obtained from sugar ; and therefore, in all probability, it is not the basis of this active medicine.

He has found, that a solution of opium poured into the eye, occasions a slight temporary inflammation : but that it produces no contraction of the living muscular fibre ; though it acts as an astringent to a divided artery, and shows other marks of astringency from the test of chalybeates.

His experiments clearly show the effects of acids, as counteracting the power of opium in certain circumstances ; and they demonstrate, that while the refinous part of opium acts more expeditiously than the gummy, so it is also more quick in its operation when previously heated than when taken in a cold state.

But for a full account of these, as well as various other important particulars, we must refer those who wish for farther information to the work itself.

After



After the delivery of the prize-medal to Mr Leigh, an article was proposed as the subject of competition for the present year, the powers of which in many respects approach to those of opium; the *Hyosciamus Niger*, or Henbane. This article, from the earliest periods of medicine of which we have any authentic accounts, has been frequently employed for producing the sedative effects of alleviating pain and inducing sleep: And after falling into disuse, its employment has again been revived, for these and other important purposes. An experimental inquiry, therefore, concerning its effects on the human system, its use in the cure of diseases, and the comparative power of its different parts, will be no unimportant investigation.

At this meeting, also, an experimental inquiry concerning the chemical and medical effects of those substances called Lithontriptics, particularly on the human calculus, was announced as the subject of the prize-question for 1787. The late experiments of those illustrious chemists Scheele and Bergman, ascertaining, with much greater precision than had before been done, the real constituents of

the human calculus, may considerably aid this investigation. The reputed lithontrip-tics, to which it is wished that candidates should chiefly turn their attention, are the mineral acids, and the alkalis both in their mild and caustic state.

Dissertations on the first of these subjects must be transmitted to Drs Duncan or Webster by the 1st of January 1787, and on the last by the 1st of January 1788. Each dissertation must be accompanied with a sealed letter, inclosing the name of the author, and bearing the same motto with the dissertation itself.

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The following prize-question for the year 1786, has been proposed by the Royal Academy of Sciences at Petersburg.

Auspiciis augustæ Catharinæ II. literarum atque artium protectricis maximæ, academia

Petropolitana, dirigente illustrissima principe Daschkoff, Augustæ ab intimis cubiculis, et ordinis Sanctæ Catharinæ equite, problema sequens ad annum 1786 proposuit.

Uti nutritio æquabilis omnium punctorum corporis animalis quæ singula vasa non adeunt, imprimis epidermidis, unguium, pilorum, cornuum quæ vasis careant, aliaque phænomena docent, succos nutritios primo quidem per vasa ferri vi cordis, deinde vero ultro moveri, quo usque vasa non pertingunt vi aliqua peculiari a motu cordis diversa; uti etiam in plantis, quibus nihil est, quod cum corde comparari possit, similis prorsus nutritio, similisque distributio humorum efficitur, quæstio est, Qua vi hæc distributio humorum in plantis et in partibus dictis corporis animalis peragatur, et quænam sit ejus vis natura?

Si parum etiam fuerit, quod ad intelligendam hanc naturæ actionem contribuatur, solide modo quævis asserta sint evicta. Neque refert novisne et propriis experimentis, an aliis jam notis veritatibus explicationes superstruantur.

Dissertations on this subject, written either in the Russian, Latin, German, or French  
lan-



language, and with the usual precautions for concealing the name of the author, are directed to be transmitted by the 1st of July 1786, to John Albert Euler, secretary to the Imperial academy of sciences at Petersburg.

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The Royal Society of Medicine at Paris have lately proposed the following prize-question.

1. A prize of six hundred livres for the best solution of the following question.

Rechercher quelles sont les maladies dont le système des vaisseaux lymphatiques est le siège immédiat ; c'est à dire, dans lesquelles les glandes, les vaisseaux lymphatiques, et les fluides qu'ils contiennent, sont essentiellement affectés ; quels sont les symptômes qui les caractérisent, et les indications générales qu'elles offrent à remplir ?

Memoirs on this subject must be transmitted

to M. Vicq d'Azyr, Rue des Petits Augustins.

2. A prize of six hundred livres for the best solution of the following question :

Rechercher quelles sont les causes de la maladie aphteuse connue sous les noms de muguet, millet, blanchet, à laquelle les enfans sont sujets, surtout lorsqu'ils sont réunis dans les hopitaux, depuis le premier jusqu'au troisieme ou quatrieme mois de leur naissance ; quels en sont les symptomes ; qu'elle en est la nature ; et quel doit en être le traitement, soit preservatif soit curatif ?

Dissertations on this subject must be transmitted to the secretary by the 1st of May 1787.

3. A prize of six hundred livres for the best solution of the following question :

Determiner quelles sont les circonstances les plus favorables au developpement du vice scrophuleux ; et rechercher quels sont les moyens ; soit dietetiques soit medicaux, d'en retarder les progres, d'en diminuer l'intensité, et de prevenir les maladies secondaires dont ce vice peut être la cause ?

Memoirs

Memoirs on this subject must be transmitted by the 1st of January 1788.

4. A prize of four hundred livres for the best solution of the following question :

Determiner quels sont, relativement à la température de la saison, et à la nature du climat, les precautions à prendre pour conserver la santé d'une armée vers la fin de l'hiver et dans le premier mois de la campagne; à quelles maladies les troupes sont les plus exposées à cette époque; et quelles sont les meilleurs moyens de traiter et de prevenir ces maladies.

Dissertations on this subject must be transmitted by the 1st of May 1786.

Each dissertation must be accompanied with a sealed letter, containing the name of the author, and marked with the same motto as the memoir itself.

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The Academy of Sciences at Dijon have

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proposed a prize of six hundred livres for the best solution of the following question :

To determine by their respective properties the essential difference between phlogiston and the matter of heat.

Dissertations on this subject must be transmitted to Mr Morveau secretary of the academy at Dijon, by the 1st of April 1789.

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The Philosophical Society at Leipzig have proposed the following question for the year 1786:

Quænam habent ad se invicem relationem lux, ignis, et calor? quid novissimis in hanc rem institutis disquisitionibus detectum, et quid vel certe demonstratum, vel etiamnum dubium est?

The learned of all nations are invited to contend for this prize; and dissertations respecting it must be transmitted by the 1st of January 1787, to professor Hindenburg at Leipzig.

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Dr Hamilton of Ipswich has been for some time engaged in preparing a work, which will probably soon appear. It is intitled, “The duties of a regimental surgeon considered, with observations on his qualifications, and hints relative to a more respectable practice and better regulation of that department; wherein are interspersed many medical anecdotes, and subjects discussed equally interesting to every practitioner.”

That our readers may more easily form some idea of the author's design, we shall here present them with an account of the particular subjects which are considered in each chapter, extracted from a small prospectus of the work which Dr Hamilton has distributed among his friends.

Chap. I. Introduction.

II. Of difficulties attending a regimental surgeon's station.

C c 4

III. Of

III. Of a surgeon's qualifications, and of his tendernefs to the fick foldiery.

IV. Surgeons cautioned from fpending too much time in amusements with the officers, left they thereby neglect their duty ; and of the impropriety of granting them double commiffions.

V. Of intoxication, of its greater criminality in the furgeon than others of the corps.

VI. Of the medicines and their dofes.

VII. Of diffections.

VIII. Of the neceffity of good instruments, of the ufe of fixable air and of electricity in regimental practice.

IX. Of the perufal of books, and fome pointed out which fhould form part of his library.

X. The utility of cultivating the acquaintance of medical men in the different quarters, and the ftudy of the nature of the foil and qualities of the water in each, recommended.

XI. Surgeons diffuaded from the ufe of billets in public-houfes. The reasons. The propriety of keeping a medical register.

XII. Of the punifhments of the foldiery as far as the furgeon is concerned.

XIII. The



XIII. The utility of experiments. Of too rash prognostics.

XIV. Of the mate's qualifications.

XV. Surgeon's mates unnecessary, and the propriety of augmenting the surgeon's pay.

XVI. Of extra medicines allowed each regiment when in camp, independent of the medicine-money, and their unnecessary expenditure.

XVII. The necessity of a liberal education to practise medicine successfully. Regimental practice more the province of the physician than the surgeon.

No author with whose writings we are acquainted, has taken up this subject in the light in which it is here set forth : And there can be little doubt, that, under the different heads here enumerated, much useful information may be communicated to the regimental surgeon, particularly when first entering upon the duties of that important office. This work, we are told, is also everywhere interspersed and illustrated with cases and anecdotes from actual practice. Hence we may with some degree of confidence conclude, that it will not only have the plea of novelty, but also of utility,

utility, to recommend it to the attention of the public.

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Mr Smellie, an ingenious member of the Royal and Antiquarian Societies of Edinburgh, already well known to the public by his elegant translation of the Natural History of the Count de Buffon, has lately distributed the prospectus of a work intituled, “ The Philosophy of Natural History.”

It would appear that the first idea of this work was suggested to the author by that truly ingenious and learned philosopher the late Lord Kames. He proposed that the productions of nature, which are almost infinite, should, instead of being treated of individually, be arranged under general heads ; that in each of these divisions, the known facts, as well as reasonings, should be collected and methodized in the form of regular discourses, that as few technical terms as possible should be employed, and that all the useful and amu-

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sing views arising from the different subjects should be exhibited in such a manner as to convey both pleasure and information.

Mr Smellie, having undertaken this task in consequence of his Lordship's recommendation, has now, for the space of about twelve years, been occasionally employed in collecting and digesting materials from the most respectable sources: And these materials he has interspersed with such observations and reflections as occurred. That our readers may form an idea of these, we shall here present them with a short enumeration of the principal contents of his work, extracted from the prospectus which he has published.

I. Of the distinguishing characters of animals, plants, and minerals—The analogies between the plant and animal, arising from their structure and organs, their growth and nourishment, their dissemination and decay.

II. Of the organs and general structure of animals—A short account of the external and internal parts of the human body—This structure compared with that of quadrupeds, birds, fishes, and insects—How far peculiarities of  
structure



structure are connected with peculiarities of manners and dispositions.

III. Of the respiration of animals—Air necessary to the existence of all animated beings—The various modifications of the organs employed by nature for the transmission of air into animal bodies.

IV. Of the motions of animals—The causes and instruments of animal motion—Animal compared with mechanical motion.

V. Of the senses—Modifications of feeling, on what they probably depend—The number and strength of the senses in different animals—How animals learn to correct the errors arising from sensation.

VI. Of the infancy of animals—Why some arrive sooner, others later, at a state of maturity—Different modes of managing infants in different countries.

VII. Of the food of animals—Their growth and expansion—The varieties of food used by men and other animals—Effects of their peculiar foods.

VIII. Of the sexes of animals—The mental and corporeal differences between males and females—Some animals endowed with both

sexes in the same individual—Examination of the supposed sexes of plants.

IX. Of puberty—Its symptoms and effects in different animals.

X. Of love—Its expressions and effects in different animals—Pairing—Seasons—Parental affection.

XI. Of the transformation of animals—Transformation of the caterpillar tribes—Of frogs—All animals undergo changes in their form and aspect—What are the probable intentions of nature in changing forms.

XII. Of the habitations of animals—Their different modes of constructing abodes for warmth and protection to themselves and their offspring—The form and manner of their habitations accommodated to the exigencies of the animal.

XIII. Of the hostilities of animals—Their sympathies and antipathies—How these may be removed by custom and association, by necessity or force—Why animals prey upon one another, but seldom on their own species—Advantages derived from this seemingly destructive institution of nature.

XIV. Of the artifices of animals in catching  
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ing their prey, and escaping their enemies—These artifices are in general purely instinctive, but some animals can vary their mode of attack and defence according to particular circumstances and situations.

XV. Of the society of animals—What are the motives and advantages of it—Gregarious tribes—Whether man belongs to this tribe—Society of two kinds.

XVI. Of the docility of animals—How far improveable by culture—Effects of domestication.

XVII. Of the characters and dispositions of animals—Rapacious, mild, timid, bold, generous.

XVIII. Of the migration of animals—More general than commonly believed—The probable motives which induce animals to migrate.

XIX. Of the principle of imitation in animals—Is the nearest approach to reasoning and language.

XX. Of the instinct of animals—Division of instincts—Examples of pure instincts—Of such instincts as can accommodate themselves to peculiar circumstances and situations—Of  
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instincts improveable by observation and experience—Some conclusions from this view of instinct.

XXI. Of the progressive scale of animals—stops at man, and why—In this world it appears to be impossible that a being superior to man could exist—Reasons for this opinion.

XXII. Of the longevity and death of animals—A comparative view of animals with regard to the duration of life, and its consequences.

From this view of Mr Smellie's intended publication, it is evident, that his work, if properly executed, must communicate to the reader a species of knowledge which cannot fail to be an inexhaustible source of pleasure; and, from the well-known abilities of the author, we have no doubt that it will be executed in a manner not unworthy of the subjects under consideration. The work is already in the press, and will probably be published during the course of the present year.

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It is now near forty years since the improved edition of the London Pharmacopœia, at present followed by all the apothecaries in England as the rule for compounding and preparing their medicines, was first published. It was then very generally considered, and probably with justice, as being the best Pharmacopœia in Europe: But since that period many articles which were then frequently employed, are now found to be of very little use; many articles have been introduced into practice, in which modern practitioners are disposed to place considerable consequence; and, above all, many important discoveries have been made in those principles of chemistry, on which the proper composition and preparation of medicines, both with respect to elegance and activity, must depend. Accordingly, within the period we have mentioned, most of the colleges of physicians in Europe have

have republished their pharmacopœias with many alterations ; and it has often been wished that this were also done by the college of physicians of London. We are happy to learn that this important work is now far advanced, and that a new edition of the London Pharmacopœia may soon be expected.

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The Royal Society of Edinburgh, some months ago, appointed a committee of their number to superintend the publication of the first volume of their Transactions. That work is now far advanced, almost the whole of the volume being printed off. This publication will consist of three parts: The first will contain an account of the society, of the objects to which its attention is to be directed, of its present regulations, and circumstances of a similar nature. The second will consist of a selection from those papers which have been read before the physical class of the society ; and

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the third of a similar selection from those read before the literary class. With regard to this volume, we shall only at present observe, that many of the papers already printed off, are the productions of men of distinguished eminence ; and will, we doubt not, serve not only to support, but even to extend, the reputation which they have already acquired.

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In the year 1761, upon the death of Dr Alston, professor of materia medica in the university of Edinburgh, Dr Cullen, to prevent the injury which the students would otherwise have received, delivered a course of lectures on that subject. As these lectures were very generally admired by his hearers, and as there was but little prospect that they would ever be delivered again, they were published about twelve years ago at London, from notes taken by some of his pupils. This publication, however, took place without the knowledge or consent of the author ; and, it  
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may naturally be supposed, was in many particulars incorrect. Though this measure was by no means agreeable to Dr Cullen, yet upon application being made to him by the editors, he allowed the copies which had been printed, to be sold off, after having added a few sheets of emendanda. In consequence of this publication, however, he formed the resolution of publishing, in a very different form, his sentiments on the *Materia Medica*; and, since the period mentioned above, he has employed much attention on that subject. We are happy to inform our readers, that he has now made such progress in this work, that it will probably be put to the press in no long time; and we have no doubt that it will answer the expectations entertained of it by those who are best acquainted with the abilities of the author.

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Some years ago a work was published at  
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this place under the title of a *System of Anatomy*. It was compiled from some of the latest and best authors; and it was arranged, as nearly as the nature of the work would admit, in the order of the lectures delivered by the professor of anatomy in the university of Edinburgh. Though this work might be considered as particularly calculated for the students of anatomy at this place, yet as being a judicious selection of the best publications on different anatomical subjects, it could not fail to be of general utility to those engaged in the study of that branch of medicine; and it has accordingly met with a very favourable reception from the public. From this circumstance the editor has been induced to put it again to the press, and another edition of it will soon appear in an improved form. It is now to be extended to three volumes, and will contain many useful anatomical tables. To this edition is added a *System of Physiology*, subjoined to the anatomy of each part; collected and written by a member of the university of Edinburgh, distinguished for his industry and ingenuity in anatomical subjects.

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The fifth volume of the *System of Surgery*, which we have frequently mentioned as a truly valuable work, written by Mr Benjamin Bell, is now nearly printed off, and will very soon be published. In this volume Mr Bell treats chiefly of wounds, tumours, and amputation. In the sixth volume, which will probably be published about the beginning of the year 1788, and with which he intends to conclude this work, he proposes to treat of those important subjects in surgery which have not been considered in his former volumes, and particularly of fractures and luxations.

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A new edition of Dr Smellie's plates of Midwifery, with explanations and considerable additions, adapting them to the present practice, will soon be published at this place.

The publication of this work is conducted under the direction of Dr Alexander Hamilton professor of midwifery in the university of Edinburgh. It is intended that two editions shall at present be published; the one in folio from Dr Smellie's original plates; and the other in octavo, of such a size that it may conveniently be bound up with Dr Hamilton's different publications on the subject of midwifery.

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We mentioned in our last volume, that Mr Andrew Bell engraver to his Royal Highness the Prince of Wales for Scotland, who lately published an elegant edition of Albinus's anatomical tables of the muscles, had engaged in a very extensive anatomical work, to be selected from the best plates of Haller, Monro, Walterus, &c. This work is now so far advanced, that some part of it will probably soon be published.

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Dr William Nisbet, one of the fellows of the Royal college of surgeons at this place, is at present engaged in a work intituled, First Lines of the Theory and Practice in Venereal Diseases. A considerable part of this work is already printed off, so that it will probably be published in a short time.

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Dr Thomas Houlston of Liverpool lately published Observations on Poisons, and on the use of mercury in the cure of obstinate dysenteries. A new edition of this work, with considerable alterations by the author, and an appendix which has never before been published, is now in the press at this place.



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In the 27th volume of the *Commentarii de rebus in Scientia Naturali et Medicina gestis*, published at Leipzig in 1785, some account is given of a botanico-zoological work, which may soon be expected to be published by the learned and eminent Jo. Ant. Scopoli, intitled, *Deliciæ Floræ et Faunæ Insulariæ*. To exhibit a more distinct view of the manner in which he describes both plants and animals, they give an example of each; from which it appears that the descriptions are no less perspicuous than accurate.

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During the course of the year 1786, the following gentlemen, distinguished for their abilities

lities in medicine and medical philosophy, have died in different parts of Britain :

Mr William Rae surgeon in London and dentist to his Majesty, on the 26th of July.

Dr James Spence physician at Guildford, and fellow of the Royal college of physicians in Edinburgh, on the 24th of September.

Dr James Maddocks physician to the London hospital, on the 10th of October.

Dr Alexander Wilson professor of practical astronomy in the university of Glasgow, on the 16th of October.

Sir John Elliot, Baronet, physician in ordinary to his Royal Highness the Prince of Wales, on the 7th of November.

Dr John Hope president of the Royal college of physicians in Edinburgh, botanist to his Majesty for Scotland, and Town's professor of botany in the university of Edinburgh, on the 10th of November.

Sir E. Wilmot, Bart. physician in ordinary to the King, and physician-general to the army, on the 21st of November.

We expected to have been able to present to our readers memoirs concerning the life, writings, and discoveries of some of those  
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gentlemen; but we have not been able to obtain the necessary materials for that purpose sufficiently early for insertion in this volume. We flatter ourselves, however, with the hope, that from this delay we may be enabled to supply the defect in a manner more satisfactory to our readers in our next volume; and we shall hold ourselves much obliged to those gentlemen who shall favour us with any particulars respecting them which they think of an interesting nature,

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Mr Thomas Beddoes, well known to the literary world by his translations of different works of Spallanzani, Bergman, Scheele, and other eminent philosophers and chemists, has been appointed lecturer in chemistry in the university of Oxford, in the room of Dr Austin who has settled in London.



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Sir Clifton Wintringham has been appointed physician-general to the army, and Sir Richard Jebb one of the physicians in ordinary to his Majesty; both which offices became vacant by the death of the late Sir E. Wilmot.

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Dr Daniel Rutherford has been appointed professor of botany in the university of Edinburgh, in the room of the late Dr Hope.

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The president and council of the Royal Society have adjudged, for the year 1785, the medal on Sir Godfrey Copley's donation to major-general William Roy for his measurement of a base on Honslow-heath.

Dr

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Dr Jodrell has been appointed phyfician to the London hofpital, in the room of the late Dr Maddocks.

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During the courfe of the year 1786, the following gentlemen have been admitted fellows of the Royal college of furgeons in Edinburgh.

Dr Alexander M'Dougall on the 24th of April; Dr William Nifbet and Dr John Bell, on the 14th of Auguft.

The furgeons have alfo conferred the rank of honorary fellows of their college, on his Grace the Duke of Buccleugh, the Right Honourable Henry Dundas, and Percival Pott, Efq; furgeon in London.

During

During the year 1786, the following gentlemen have been elected fellows of the Royal college of physicians in Edinburgh.

Dr Robert Freer, on the 2d of May ; Dr David Morton of Jamaica, on the 2d of August ; and Dr Thomas Stevenson of Arbroath, on the 7th of November.

Dr Thomas Cochrane was admitted a licentiate at the quarterly meeting of the college in November.



In former volumes we have frequently had occasion to mention the progress which had been made in building and finishing a hall for the use of the Medical Society of Edinburgh. We are happy to inform our readers, many of whom are members of this institution, though now settled in different parts of the world, that this building is completely fitted up ; so that the society are now not only provided with an elegant hall for their weekly meetings, and an excellent apartment



for their library, but also with several convenient rooms appropriated for the purposes of private dissection and of chemical experiments. And they have now adopted it as a part of their institution to appoint annually an experimental committee, who are allowed a certain sum from the funds of the society, for defraying the expence of such experiments as the society shall think proper to direct on particular subjects. But besides this, it is also intended, that the use of these rooms shall be allowed, under proper regulations, to any of the members who choose to conduct experiments at their own expence.

The society have resolved that a gold medal shall be presented to Dr Duncan, who has held the office of treasurer from the time that the scheme of building a hall was first adopted, till it has been thus finished, and the whole expence incurred in fitting it up completely paid.

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The following is the general result of observations made at the distance of about a mile from the city of Edinburgh, on the state of the thermometer and barometer, and on the quantity of rain which has fallen during the year 1786.

Months.	Thermometer.			Barometer.			Rain.
	Highest	Lowest	Med.	Highest	Lowest	Med.	
Jan.	50	11	32.7	30.3	29.0	29.3	1.80
Feb.	46	23	34.4	30.4	29.0	29.5	1.03
Mar.	45	15	30.1	30.6	28.8	29.6	0.37
April	69	40	51.0	30.3	29.2	29.7	0.04
May	68	42	55.6	30.0	29.1	29.3	0.43
June	81	54	60.8	30.2	29.1	29.6	0.15
July	73	53	65.3	30.0	28.9	29.2	0.17
Aug.	68	54	62.2	30.0	29.0	29.5	1.40
Sept.	63	50	55.8	30.1	28.0	29.2	0.98
Oct.	53	26	39.7	30.2	28.2	29.3	0.87
Nov.	46	27	36.3	30.3	29.0	29.6	0.58
Dec.							

As this article must go to the press before the end of December, we have it not in our power to insert the state of that month, which we therefore delay till our next volume. We may, how-

however, observe, that from comparing the metereological register for 1785 with that for 1786, there appears to be a very remarkable difference with respect to the quantity of rain. During 1785, the quantity of rain amounted to more than thirty inches; but from the 1st of December 1785 to the 1st of December 1786, it amounts to little more than nine inches; which is considerably less than the quantity which fell in the preceding year during the month of September alone.

S E C T.



## SECTION IV.

## LIST OF NEW BOOKS.

**E**XPERIMENTS and observations on a new species of bark, showing its great efficacy in very small doses ; also a comparative view of the powers of the red and quilled bark, being an attempt towards a general analysis and compendious history of the valuable genus of Cinchona or the Peruvian bark. By Richard Kentish, M. D. Member of the Royal Medical Society at Edinburgh, correspondent member of the Society of Scottish Antiquaries, &c. 8vo, London.

A new experimental inquiry into the nature and qualities of the Cheltenham water; with a concise account of the diseases in which it is chiefly indicated, and the diet and regimen necessary for its successful use. By A. Fothergill, M. D. F. R. S. Member of the Royal College of Physicians in London, of the Medical Societies of London and Edinburgh, and Physician in Bath, 8vo, Bath.

Filices Britannicæ ; an history of the British proper ferns, with plain and accurate descriptions, and new figures of all the species and varieties, taken from an immediate and careful inspection of the plants in their natural state, and engraved on thirty-one copper-plates, with the particular place noted where each species was lately gathered, and is at this time growing, in the North of England, or on the mountains of Wales. By James Bolton of Halifax, 4to, Leeds.

Nosologia methodica oculorum, or a treatise on the diseases of the eyes, selected and translated from the Latin of Francis Boissier de Sauvages, wherein the whole are methodically arranged ; to which are also added the description and methods of cure recited by those authors who have written professedly on the various subjects herein enumerated. By George Wallis, M. D. 8vo, London.

A dissertation on milk ; in which an attempt is made to ascertain its natural use, to investigate experimentally its general nature and properties, and to explain its effects in the cure of various diseases ; likewise to point out the varieties in the food of the animal from  
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which it is taken, and the circumstances in the mode of life and conduct of those women who afford it, which more especially tend to change its appearance, and to impair its salutary qualities; and particularly to enforce the cautions and restrictions which are necessary to be observed by those whose duty or business it is to suckle an infant race. By Samuel Ferris, M. D. Extraordinary Member and late President of the Royal Medical Society at Edinburgh, 8vo, London.

Directions for impregnating the Buxton water with its own and other gasses, and for composing artificial Buxton water. By George Pearson, M. D. Member of the Royal College of Physicians, London, 8vo, London.

An essay on the virulent gonorrhœa; in which the different opinions respecting the treatment of the disease are carefully examined, and a method of cure deduced from them as founded on the principles of anatomy and physiology. By J. Clubbe surgeon, 8vo, London.

Aretæus, consisting of eight books on the causes, symptoms, and cure of acute and chro-



nic diseases, translated from the original Greek.

By John Moffat, M. D. 8vo, London.

A treatise on the gout; in which the primitive cause of that disease, and likewise of gravel, is clearly ascertained, and an easy method recommended, by which both may be with certainty prevented, or radically cured, 8vo, London.

An account of an entire new method of curing burns and scalds, 8vo, London.

Explanation and index of two mineralogical tables. By Tiberius Cavallo, F.R.S. 8vo, London.

Arbustrum Americanum, the American grove; or an alphabetical catalogue of forest-trees and shrubs, natives of the American united states, arranged according to the Linnæan system, containing the particular distinguishing character of each genus, with plain simple and familiar descriptions of the manner of growth, appearance, &c. of their several species and varieties; also some hints of their uses in medicine, dyes, and domestic œconomy; compiled from actual knowledge and observation, and the assistance of botanical authors.

thors. By Humphry Marshall, 8vo, Philadelphia.

Transactions of the American Philosophical Society, Vol. II. 4to, Philadelphia.

An oration delivered before the American Philosophical Society, held in Philadelphia on the 27th of February 1786, containing an inquiry into the influence of physical causes upon the moral faculty. By Benjamin Rush, M. D. and Professor of Chemistry in the University of Pennsylvania, 4to, Philadelphia.

Memoirs of the American Academy of Arts and Sciences, Vol. I. 4to, Boston.

A synopsis of a course of lectures on the theory and practice of medicine, in four parts. Part I. By B. Waterhouse, M. D. Professor of the Theory and Practice of Physic in the University of Cambridge, New England, and of Natural History in the College of Rhode Island, 8vo, Boston.

An experimental inquiry into the nature and properties of opium, and its effects on living subjects; with observations on its history, preparations, and uses; being the disputation which gained the Harveian prize for 1785. By John Leigh, M. D. 8vo, Edinburgh.

Experiments and observations relating to various branches of natural philosophy, with a continuation of observations on air. By Joseph Priestley, L. L. D. F. R. S. Vol. III. 8vo, London.

Medical sketches, in two parts. By John Moore, M. D. 8vo, London.

Medical cautions for the consideration of invalids, more especially of those who resort to Bath. By James-Makittrick Adair, M. D. Member of the Royal Medical Society, and Fellow of the College of Physicians, Edinburgh. Published for the benefit of the General Hospital at Bath, 8vo, London.

An essay on evacuations. By John Anderson, M. D. 8vo, London.

Experiments and observations on quilled and red Peruvian bark; among which are included some remarkable effects arising from the action of common bark and magnesia upon each other: With remarks on the nature and mode of treatment of fevers, putrid sore throat, rheumatism, scrophula, and other diseases, in order to ascertain the cases in which bark may be administered, either alone or combined with other remedies, to the best advantage;



vantage ; to which is added an Appendix on the Cinchona Caribbæa. By Thomas Skeete, M. D. 8vo, London.

Observations on the acute dysentery, with the design of illustrating its causes and treatment. By John Rollo, M. D. late surgeon in the Royal Artillery, 8vo, London.

The present practice of surgery, containing the description, causes, and treatment of each complaint, together with the most approved methods of operating. By Robert White, M. D. and practitioner in surgery, 8vo, London.

Arctic zoology, Vol. I. 4to, London.

A dissertation on the sexes of plants. Translated from the Latin of Linnæus. By J. E. Smith, F. R. S. 8vo, London.

Cautions concerning cold bathing and drinking mineral waters. By William Buchan, M. D. 8vo, London.

Observations on antimonial preparations, with a description of a new antimonial powder of peculiar efficacy in fevers and inflammatory distempers, and singularly successful in the febrile diseases of children, 8vo, London.

An essay on the waters of Harrowgate and

Thorp-Arch in Yorkshire. By Joshua Walker, M. D. Physician to the Leeds Infirmary, 8vo, London.

Clinical observations on the use of opium in low fevers and in the synochus, illustrated by cases; with some previous remarks on the epidemic fever which prevailed in 1785 at Oxford and in the neighbouring counties; in a letter to John Badeley, M. D. Physician at Chelmsford, Essex. By Martin Wall, M. D. Lord Litchfield's Clinical Professor, one of the Physicians to the Radcliffe Infirmary, and late Fellow of New College, 8vo, Oxford.

A treatise on the asthma; to which are added cases and observations, in which the asthma is complicated with other diseases. By Thomas Withers, M. D. Physician to the York-county Hospital, 8vo, London.

Medical reports of the effects of arsenic in the cure of agues, remitting fevers, and periodic headaches. By Thomas Fowler, M. D. Physician to the General Infirmary of the County of Stafford, together with a letter from Dr Arnold of Leicester, and another from Dr Withering, describing their experience of the effects

effects of arsenic in the cure of intermittents, 8vo, London.

Observations on certain parts of the animal œconomy. By John Hunter, 4to, London.

The anatomy of the absorbing vessels of the human body. By William Cruikshank, 4to, London.

Dr Milman's animadversions on the nature and cure of the dropfy. Translated from the Latin into English, by F. Swediaur, M. D. 8vo, London.

An inquiry into the present state of medical surgery, including the analogy between internal and external disorders, and the inseparability of those branches of the same profession, Vol. II. By Thomas Kirkland, M. D. Member of the Royal Medical Society at Edinburgh, 8vo, 1786.

A letter to a physician in the country on animal magnetism, with his answer, 8vo, London.

Experiments and observations relating to acetous acid, fixable air, dense inflammable air, oils and fuel, the matter of fire and light, metallic reduction, combustion, fermentation, putrefaction,



putrefaction, respiration, and other subjects of chemical philosophy. By Bryan Higgins, M. D. 8vo, London.

An inquiry into the origin and antiquity of the lues venerea; with observations on its introduction and progress in the islands of the South Sea. To which is added a short view of the various remedies recommended in that distemper, from its first appearance in Europe to these times, with general remarks on the received modes of treatment. By William Turnbull, surgeon of his Majesty's navy, 8vo, London.

A narrative of the death of Captain Cook; to which are added some particulars concerning his life and character; with observations respecting the introduction of the venereal disease into the Sandwich islands. By David Samwell surgeon of the Discovery, 4to, London.

The chemical essays of Charles-William Scheele, translated from the transactions of the Academy of Sciences at Stockholm, revised, with additions. By Thomas Beddoes, Esq; President of the Royal Medical, of the Natural  
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ral History, and Chemical Societies at Edinburgh, 8vo, London.

A treatise on the venereal disease. By John Hunter, 4to, London.

Observations on the medical virtues of wine. In a letter to Dr Buchan, by a gentleman of the Faculty. To which is added an account of some remarkable cures performed by the Tokay de Espagna, with other matters which are new and well worth the attention of the public, 8vo, London.

Nouveaux memoires de l'Academie de Dijon pour la partie des Sciences et Arts, 8vo, Dijon.

Recueil d'observations chirurgicales, faites par M. Saviard, ancien maitre-chirurgien de l'Hotel-Dieu, et juré a Paris, commentées par M. Le Rouges medecin ordinaire du Roi, et chirurgien interne de l'Hotel-Dieu, 12mo, Paris.

Traité de gale et des dartres des animaux, par M. Chabert, Directeur et Inspecteur Général des Ecoles Royales Vétérinaires de France, correspondant de la Société Royale de Médecine, &c. 8vo, Paris.

Essai

Essai sur la vie, considere principalement dans les differentes périodes de sa durée, par C. M. Richard de la Vergne, 8vo, Montpellier.

Nouvelles observations pratiques sur les maladies de l'oeil, et leur traitement. Par M. Gleize Docteur en Médecine, Médecin-oculiste de leur Altesse Royales et Serenissimes Messieurs Comte d'Artois et feu le Duc d'Orleans, 8vo, Paris.

Essai sur le phenomène de l'électricité, et les avantages qu'on en peut tirer: suivi d'un petit discours sur les mouvemens que l'amour fait éprouver. Par le Sieur Molenier, Médecin privilégié du Roi, et Inspecteur Général des remèdes que vendent les privilégiés, 8vo, Montpellier.

Memoires de Chymie de M. C. W. Scheele, tirés des Memoires de l'Academie Royale des Sciences de Stockholm, traduits du Suédois, et de l'Allemand, 12mo, Dijon.

Analyse chimique et concordance des trois regnes. Par M. Sage, 8vo, Paris.

Observations generales sur les maladies des climats chauds, leurs causes, leur traitement, et les



les moyens de les prevenir. Par M. Azille  
Medecin du Roi à S. Dominique, 8vo, Paris.

Observations sur les obstacles qui s'opposent aux progrès de l'Anatomie. Par M. Tennon, Professeur Royal au College de Chirurgie de l'Academie Royale des Sciences, 4to, Paris.

Pharmacopœia pauperum, in usum instituti clinici Hamburgensis, edita à societate medica. 8vo. Hamburgi.

E. G. Baldinger programma, historia mercurii et mercurialium, 8vo, Gottingæ.

J. S. Burgmans lithologia Groningiana, 8vo, Groningæ.

Observationes circa radicis gei urbani sive caryophyllatæ vires in febribus precipue intermittentibus aliisque morbis, institutæ à R. Buchave, 8vo, Hauniæ.

Ratio occurrendi morbis a mineralium abusu produci solitis, autore Theodorico-Petro Caels, 12mo, Amstelodami.

Scriptorum Latinorum de aneurismatibus collectio, edidit atque præfatus est Thomas Louth, M. D. et Prof. 4to, Argentorati.

Edvardi Sandifort, medicinæ, anatomies et chirurgiæ in academia Batava quæ Leidæ est Professoris,

Professoris, descriptio ossium hominis. Accedit oratio de officio medici perquam difficilè à multis pessime neglecto, 4to, Lugd. Batavorum.

Pharmacopœia Wirtembergica, in duas partes divisa; quarum prior materiam medicam historico-physico-medice descriptam, posterior composita et præparata, modum præparandi et encheireses, exhibet; cura Collegii archiatrialis Wirtembergici. Editio nova, revisa; aucta, et emendata. 8vo. Laufannæ.

Caroli Petri Thunberg, Med. Doct. et Prof. Acad. Cæs. N. C. Reg. Scient. Holm. &c. membri, Flora Japonica, sistens plantas insularum Japonicarum, secundum systema sexuale emendatum, redactas ad viginti classes, ordines, genera et species, cum differentiis specificis, synonymis, paucis descriptionibus concinnis, et xxxix iconibus adjectis, 8vo, Lipsiæ.

Josephi Quarin, Sacræ Cæs. Reg. Apost. Majest. Consil. Aulic. et Archiat. in Nosocom. General. Vindobon. Directoris Supremi, Animadversiones practicæ in diversos morbos, 8vo, Viennæ.

DISSERTATIONES MEDICÆ INAUGURALES,  
quas ex auctoritate Reverendi admodum viri  
Gulielmi Robertson, S.S.T.P. academix Edin-  
burgenæ Præfecti, nec non amplissimi Senatus  
Academici consensu et nobilissimæ facultatis  
medicæ decreto, pro gradu Doctorali summis-  
que in medicina honoribus rite et legitime  
consequendis, eruditorum examini subjece-  
runt, ad diem 24mo Junii, 1786,

Joannes Addie, Scotus, *De Diarrhœa.*

Gulielmus Barton, Anglus, *De Rachitide.*

Samuel Black, Hibernus, *De ascensu Vapo-  
rum spontaneo.*

Onophrius Aram Bryan, Britannus, *De Me-  
læna.*

Gulielmus Calder, Britannus, *De Variolis  
insitivis.*

Joannes Ewart, Scotus, *De Chorea.*

Joannes Ffrye, ex insula Antiguæ, *De Co-  
lica saturnina.*

Jacobus Forster, A. B. Tr. Col. Dub. *De  
Hæmoptysi.*

Henricus Galloway, Scotus, *De Respiratione.*

Jacobus Skelton Gilliam, Virginienfis, *De  
Diarrhœa.*

Gulielmus



Gulielmus Haliday, A. M. Hibernus, *De Electricitate Medica.*

Bicker M'Donald, Hibernus, *De Mensibus et naturaliter et immodice fluentibus.*

Georgius Monro, M. B. Delavariensis, *De Suffocatione stridula.*

Ricardus Pearson, Anglus, *De Scrophulâ.*

Joannes Reid, Scoto-Britannus, *De Colicâ Pictorum.*

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Joannes Rutter, Anglus, *De Phthisi Pulmonali à tuberculis oriunda.*

Gulielmus Scott, Hibernus, *De Acido Atmosphærico sive Aëreo.*

Caspar Wistar, M. B. Pensylvaniensis, *De Animo demisso.*

Gulielmus Younge, Anglus, *De Colica.*

DISSERTATIONES MEDICÆ INAUGURALES  
ad diem xii Septembris.

Georgius Bachmetive, A. M. Muscovienfis, *De Variolis inferendis.*

Jo. Burnside, Hibernus, *De Phrenitide Idiopathica.*

J. Cafement, Hibernus, *De Rheumatismo Acuto.*

Nicolaus Elcock, Hibernus, *De Morbo Venereo.*

Joannes H. Gibbons, M. B. Pensylvaniensis, *De Vestitu Laneo.*

H. Gillan, Scotus, *De Igne.*

Edmundus Goodwyn, Anglus, *De Morbo Morteque Submersorum investigandis.*

Jacobus Jeffray, Scotus, A. M. *De Placenta.*

Georgius Kirkaldie, Scotus, *De duabis Aëris Speciebus Aquam gignentibus.*

Ignatius Maria Ruez Luzuriaga, Cantaber-Hispanus, *De reciproca atque mutua Systematis Sanguinei et Nervosi Actione.*

Samuel Latham Mitchell, de civitate Novo-Eboraco, *De novi Animalis Genitura.*

Joannes Prendergast, Hibernus, *De Colica Pictorum.*

Jacobus Watson Roberts, ex Insula Antigua, *De Morbillis.*

Gulielmus Whitelaw, Hibernus, A. B. Trin. Col. Dub. *De Rubeola.*

Disputatio Medica Inauguralis quam in comitiis Universitatis Andreanæ, pro Gradu Doc-

torali, eruditorum examini subjecit Jacobus Ramfay, Virginienfis, *De Intermittentibus*.

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From an accidental circumſtance, the following article, which ought to have been inſerted in the account of intended publications, was omitted in its proper place ; and likewise the title of the French tranſlation of Dr Haygarth's treatiſe on the ſmall-pox.

\* \* \* \*

Dr Monro has been for ſome time engaged in preparing for the preſs, a work on the Burſæ Mucoſæ. It is to be intituled, A Deſcription of the Burſæ Mucoſæ in the Human Body, their ſtructure explained, and compared with that of the capſular ligaments of the joints, and of thoſe ſacs which line the thorax and abdomen ; with remarks on the accidents and diſeaſes which affect thoſe ſeveral ſacs, and the operations neceſſary for their cure ;



cure; illustrated with ten tables, which represent the parts of their natural size.

To those who are acquainted with Dr Monro's lectures and demonstrations, we need hardly observe, that this is a subject on which he has bestowed very particular attention; nor need we add, that it is not merely a matter of curiosity in speculative anatomy, but of utility in practical surgery.

\* \* \* \*

Recherches sur les moyens de prevenir la Petite-Verole naturelle; (et procedés d'une Societé à Chester pour cet object, et pour rendre l'Inoculation generale). Traduits de l'Anglois de M. Haygarth, D.M. par M. de la Roche, Medecin de Monseigneur le Duc d'Orleans, et du regiment des Gardes-Suisses, Membre du College des Medecins de Geneve, et de la Societé Royale de Medecine d'Edinburgh; à Paris, 1786.

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